What's Eating You - some of the parasites that cause disease and what to do against them

By Prof. Desiré Dubounet

Take a closer look at some creatures that may call you home.
Full Spectrum Micronutrient Treatment of Bacteria (Homeopathic Treatment of Bacterial Infections)

Abstract

Keywords

Procedure, Test #1

Procedure, Test #2

Results

Discussion

Bibliography

FUNGUS - The species specific understanding of, and difference between bacterial phase and fungal phase developments in blood pictures.

Primitive bacterial variants and cell wall deficient fungal species

Candida Albicans

About the Author

Investigator Sponsored Trials

What’s eating U...

1. Dust mite

The dust mite is a microscopic insect -- about 0.5 millimeters (0.012 inches) in length -- that lives in human homes, where it feeds on the dust produced by human and animal skin. Dust mites are not harmful in themselves, but their droppings, which contain leftover digestive enzymes, are a significant cause of asthma and other allergy-related diseases. A person sheds enough skin annually to feed approximately one million dust mites.

2. Human flea

Fleas are common bloodsucking parasites. Having no wings, a flea cannot fly, but, having a flat body, it can slip through the strands of its host's hair or fur quite easily on its powerful legs. Only about 3 millimeters (0.125 inches) long, the human flea, Pulex irritans, can jump as far as 33 centimeters (13 inches). Fleas can be quite dangerous because they can carry disease from one host to the next.
3. Bed bug

The bed bug is a small, wingless, parasitic, bloodsucking insect that feeds on mammals, especially people. The bed bug, often a carrier of infectious diseases, is so named because it often infests beds. Bed bugs can grow to 5 millimeters (0.157 inches) in length and can drink up to six times their weight in blood -- furthermore, they can lie dormant for up to 550 days without food.

4. Louse

The human head louse, Pediculus humanus, is one of several kinds of lice with mouth parts specialized for sucking blood. The small, wingless insect has a flattened body 3 millimeters (0.118 inches) long, with a claw on the end of each leg that helps it cling to the hair of its host.

Females lay whitish eggs, called nits, once a day, attaching them to the hair with a sticky substance. They hatch in about a week. Head lice are unpleasant and undiscriminating guests. They infest people who bathe often as well as those who do not, leaving itchy red spots on their hosts' scalps.

5. Whipworm

The human whipworm, Trichuris trichiura, is a roundworm parasite that infests the large intestine. Females can grow to 50 millimeters (2 inches).

Although roundworm infections are common and frequently go unnoticed, several species, including this one, can cause serious disease. The whipworm's cylindrical, tapering body is simple, consisting of an interior gut and a muscular outer wall.

6. Blood fluke

This image reveals the intestinal Schistosoma mansoni, one of the species of blood flukes that cause the disease known as schistosomiasis. The males are thick and blue; the females are thin and clear. While in larval form, blood flukes enter the bloodstream of people or animals exposed to contaminated water in tropical and subtropical climates; they then lay their eggs inside the host's body.

The disease's symptoms, which include diarrhea, inflammation and hemorrhage, vary in humans depending on the species of fluke and what part of the body it infests. The disease may be fatal if untreated.
7. Trypanosomes

Trypanosomes are parasitic, flagellate protozoa that cause sleeping sickness and Chagas’ disease in humans. The characteristically long, wavy trypanosomes can be seen among the doughnut-shaped red blood cells in this blood sample taken from someone with sleeping sickness. The disease is carried by the infected tsetse fly.

8. E-coli

E. coli (larger, pink) and Proteus vulgaris (smaller, brown) grow side by side in this petri dish culture. Under normal circumstances both types of bacteria harmlessly inhabit the human intestines -- some 5 million E. coli bacteria normally inhabit the human and animal intestinal tract and are vital to processing vitamins in the diet. But they can become pathogenic and cause infections, such as urinary tract infections. E. coli infection from undercooked meat can be potentially life threatening.

9. Streptococcus

A common pathogenic bacterium found in the mouth, throat, respiratory tract, bloodstream, and lesions of humans is Streptococcus pyogenes. Often airborne in hospitals, schools and other public places, this bacterium is responsible for a number of human ailments, such as strep throat. Cultures of nonpathogenic lactic streptococci are used in the fermentation of dairy products such as cheese and buttermilk.

10. Lactobacillus acidophilus

Finally some friendly bacteria! Similar to the type you might consume in your probiotic yogurt drink, Lactobacillus acidophilus bacteria is shown here appearing blue. At home in your gut, the breakdown of nutrients by Lactobacillus acidophilus produces lactic acid and other byproducts that make the environment hostile for other less-welcome organisms. It also out-competes these organisms for nutrients and aids digestion.
Years ago I was excited to see some infomercials about alternative medicine treatments for diseases. The speaker talked a good show and sold me to buy his books. But there was absolutely no real advice in the books, only multilevel companies with more to buy. This made me angry and then decided to write the best self-help books on natural medicine. Editing and collecting the best in real substantiated advice.

Desire has written two incredible books and made movies to go with them. What to do for influenza and specifically what to do when the next major virus hits. A movie and self-help book designed to really help you and your families understand what to do to protect yourself.

Also cancer is such a devastating disease, and there are ways to help yourself in the kitchen with cooking for cancer patients. Full advice from soup to nuts on exercise, meditation, cooking, and more. Coupled with a video for the science of how it works.

The health care debate is bringing a question of health and care. In this incredible new book Desire has outlined a very thorough review of the real problems of Health Care. This book will tell you the truth the chemical companies do not want you to hear.

11. Scabies

This is a sample picture from DermAtlas, Johns Hopkins University.

Other DermAtlas pictures: Scabies

- Diagnosis: Scabies / Burrow
- Comments: All the family members including the parents of these children were suffering from scabies for at least 3 months. They were treated with a single overnight application of permethrin 5% cream and oral antibiotics for one week.
- Category: Infections and infestations / Papulosquamous eruptions
- Morphology: Papulosquamous (Bump, scale)
- Organization: Grouped, clustered / scattered
- Pattern: Symmetric / generalized, disseminated
- Color: Red
- Body Site: Hand Age: 5 years
- Gender: Image Year: 2005
- Contributor: Shahbaz A. Janjua, MD First Published: May 17, 2005
- Description: Symmetric red papulopustules and crusts.

Image & content, Copyright Dermatlas, Johns Hopkins University.
What is chlamydia?

Chlamydia is a sexually transmitted bacterial infection caused by Chlamydia trachomatis bacteria. It is among the most common STIs in the world.

In Canada, the majority of cases are aged 15-24, and more than twice as many reported cases are from women than from men.1 Early data for 2004 shows that the rate of chlamydia infection rose by 74.2 percent from 1997-2004. In 2003, that rate of chlamydia infection was about 180 infected people for every 100,000 people.2

How do you get chlamydia?

Chlamydia can be passed along by having unprotected oral, anal or vaginal sex.

Preventing chlamydia

Using condoms can help prevent the spread of Chlamydia. Condoms and dental dams can also be used for protection during oral sex.

Symptoms

Chlamydia bacteria can infect the cervix, rectum or the urethra. Sometimes, it can also infect the throat after performing oral sex. Infection can also spread to the eyes by touching an infected area and then touching the eye. In places where treatment is not available, these eye infections can be very serious and can cause blindness.

Most people infected with Chlamydia will not have symptoms. For those who do have them, they usually appear between 2 days to 2 weeks after contracting the infection, but it can take longer. Chlamydia is typically more serious for women than for men, but women are also less likely than men to have symptoms.

For women, symptoms may include:

- burning while urinating
- vaginal discharge or a change in normal discharge
- bleeding between menstrual cycles, or during/after intercourse
- increase in pain during menstruation or during intercourse
- abdominal or lower back pain
- occasionally causes fever and chills

Symptoms for men may include:

- itching of the penis
- pain while urinating
- discharge from the penis
- in some cases, there may also be pain or swelling of the testicles
- About half of men will have no symptoms and many will have only mild symptoms.

Symptoms of rectal infection (men and women)

- Discharge
- Redness
- Painful bowel movements
- Itchiness

Testing

Testing for chlamydia can be performed with a swabbing of the infected area (cervix, urethra, rectum) or with a urine sample.

Remember, chlamydia testing is not included in a woman’s regular Pap smear test.
A health care professional may ask for the contact information of recent sexual partners or ask that you inform them that they need testing.

**Treatment**

Chlamydia infection can be cured with antibiotics, usually with a single dose.

Follow your health professionals’ instructions, and, as with any medication, take as directed and complete the entire duration of the prescription, even if your symptoms disappear.

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**Did You Know?**

**STI Reinfecion:**

In 2006, a study followed 2419 people who had attended an STI clinic. Every three months following their visit to the clinic, the study’s participants were retested for chlamydia, gonorrhea and trichomonas. The study found that about one in four of the women and about one in seven of the men tested positive for at least one new STI within the next year.


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**Impact if not treated**

In women, chlamydia can cause Pelvic Inflammatory Disease (PID), which means that the infection has spread to the reproductive organs. This can cause infertility, chronic pelvic pain and ectopic pregnancy. Symptoms of PID can include foul-smelling discharge from the vagina, high-fever or muscle aches.

Chlamydia can also cause problems getting pregnant or during pregnancy, including miscarriage, preterm birth and low birth weight. Sometimes, the infection can be passed from mother to child during birth, causing a lung or eye infection or even pneumonia.

For men, chlamydia can sometimes cause prostate swelling and inflammation of the urethra and Epididymis. In very rare cases, it can cause infertility in men.

In rare cases it can also cause Reiter’s Syndrome, which causes symptoms such as rashes, sores and arthritis-like joint pain. Chlamydia infection can also increase the chance of transmitting HIV.

**What to tell your partner**

Like many sexually transmitted infections, many people who are infected with chlamydia will have no symptoms and will be unaware they are infected.

For this reason it is very important to be honest with your partner(s), and also to be honest with your health care provider about your sexual history. Chlamydia is curable with antibiotics, but it can cause long-term damage such as infertility if it is not treated.

Explain to your partner what testing and treatment involves, and you may want to offer to accompany them for support.

**When can I have sex again?**

Ask your health care provider. Generally, it will be safe to have sex one week after both you and your partner have completed the entire duration of antibiotic treatments, provided all symptoms have disappeared. You can reacquire chlamydia immediately after your infection has been cured. Remember, your recent sexual partner(s) have to be tested, and if they are also infected, you will need to wait until they have finished treatment and been completely cured before having sex.

It is always a good idea to use condoms to prevent STIs, but they are particularly important after you or a partner has been treated for an STI.

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**13. Gonorrhea**

**What is gonorrhea?**

Gonorrhea is a bacterial Sexually Transmitted Infection. It is caused by the bacteria Neisseria gonorrhoeae. Gonorrhea is also known as “The Clap”.

Though gonorrhea infection was on the decline, the number of people with gonorrhea infection is on the rise in Canada. The bacteria are also becoming resistant to certain types of antibiotics. From 1997 to 2004 the number of reported cases of gonorrhea nearly doubled in Canada, rising from 14.9 to 28.9 per 100,000.1

**How is gonorrhea spread?**

Gonorrhea is spread through unprotected oral, anal and vaginal sex with an infected person. It can also be spread from an infected mother to her baby during birth.

**Preventing gonorrhea**

Condoms can help prevent the spread of gonorrhea during anal or vaginal sex, and condoms or dental dams can be used for protection during oral sex.

**Symptoms**

Gonorrhea infection may occur in the rectum, penis, cervix or throat.

Both men and women may have no symptoms, and sometimes a woman’s symptoms may be mistaken for a bladder or urinary tract infection.

Remember, infected people who have no visible symptoms can still transmit the infection to others.

For those who do have symptoms, they usually appear within two to seven days of infection, but...
this can take up to 30 days. Throat infections may cause a sore throat, though symptoms are rare.

Many women do not have symptoms. Those that do have symptoms may experience:

- Burning during urination
- Rectal pain, itching, bleeding discharge
- Vaginal bleeding or pain
- Yellowish-white vaginal discharge

Some men may have very mild symptoms or no symptoms at all. Those who do may experience:

- Discharge from the penis
- Burning when urinating
- Painful/swollen testicles
- Symptoms of rectal infection may include:
  - Rectal discharge, itching or bleeding
  - Painful bowel movements

Testing

For men and women, testing for gonorrhea requires a swabbing of the infected area or a urine sample. It is important to remember that this test is not part of a regular pap test screening for cervical cancer.

Treatment methods

Oral antibiotics can usually cure a gonorrhea infection in just one dose, but it can be reacquired immediately after treatment. Some may be resistant to certain antibiotics. Your recent sexual partners should also be informed as they may require testing and/or treatment.

<table>
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<tr>
<th>Did You Know?</th>
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<tr>
<td><strong>STI Reinfection:</strong></td>
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Impact if not treated

Untreated gonorrhea can cause Pelvic Inflammatory Disease (PID) in women, which can cause chronic pelvic pain, infertility and ectopic pregnancy.

Infection can be passed from mother to child during birth, causing serious eye infections or blindness. For men, infection can cause prostatitis as well as epididymitis (inflammation of a small organ which sits at the top of the testes) which can cause infertility. In both sexes, gonorrhea can infect joints, skin, heart and brain and cause permanent damage. Gonorrhea infection increases the risks of transmitting HIV.

What to tell your partner

Not everyone who is infected with gonorrhea will have visible symptoms, and people without symptoms can still pass along the infection. So even if you had symptoms, it doesn’t mean your partner(s) will too. If untreated, gonorrhea can have serious health effects like infertility, but it can also be cured relatively easily. So be honest with your partner(s), explain what’s involved in the testing and treatment, and offer to accompany him/her if possible.

You may be required to inform recent sexual partners, as they may need to undergo testing and/or treatment.

When can I have sex again?

Ask your healthcare professional; it depends on the type of treatment you receive. Usually, with unidose treatment, you should not have sex until 7 days have elapsed after treatment. Take all medications as directed and attend any follow-up appointments that may be required. Remember that people infected with gonorrhea (like many STIs) may not have symptoms, so don’t assume that a past sexual partner is not infected because he/she does not have symptoms.

As always, you should use condoms to prevent sexually transmitted infections and gonorrhea reinfection.
14. Syphilis

What is syphilis?
Syphilis is a bacterial STI that is caused by the bacteria Treponema pallidum. It is generally a very rare STI, but it can cause serious and permanent damage to the body if it is not cured. In some rare cases, particularly where treatment is not available, syphilis infection can cause death.

Syphilis infection is very uncommon in Canada, but the number of cases is rising very quickly. From 1997 to 2004 the rate rose 908%, from 0.4 cases per 100,000 people to 3.9 cases per 100,000 people.1 These cases were mostly among men who have sex with men.

How do you get syphilis?
Syphilis is a sexually transmitted infection that is passed along through anal, vaginal or oral sex. An infected pregnant woman can also pass along the infection to her unborn child.

Preventing syphilis
The best way to help prevent syphilis is to practice safer sex practices by using condoms each and every time you have sex. Condoms or dental dams can be used for protection during oral sex.

Symptoms
Untreated Syphilis infection can progress through four stages: primary, secondary, latent and tertiary. It is most infectious in the first two stages, and does the most harm during the latent and tertiary stage. Syphilis produces a wide range of symptoms that mimic other illnesses. For this reason it has become known as “the great imitator”, and is often very difficult to diagnose.

Syphilis produces different symptoms at each stage of infection. However, some people may not experience symptoms at all during some stages, and others may have some symptoms and not others. These people with few or no symptoms are still infectious, and can still progress to later stages of Syphilis infection.

As a person progresses from stage to stage, the symptoms of syphilis may go away without treatment. This does not mean that the infection is gone. A person may think that the infection has cleared on its own after symptoms disappear, but the infection will persist and long-term
infection can cause serious and permanent damage to the heart, brain, bones or blood vessels.

**Primary Infection Symptoms:**

The main symptom of primary syphilis is a single open sore at the point of infection, typically on the genitals, anus or throat. This sore will typically appear between 10 to 90 days after infection (21 days on average).

This sore will heal spontaneously in 3-8 weeks, but this does not mean that the syphilis infection is gone or that the person is no longer infectious. Because the sore is painless and heals on its own, some people may not seek treatment, and may even forget about the sore entirely after a while. If you develop this sore, it is very important to seek treatment.

**Secondary Infection Symptoms:**

Symptoms of secondary syphilis generally occur three months after contracting the infection. They mimic flu symptoms and may include hair loss (including eyebrows and eyelashes), muscle and joint pain, rashes (particularly on the palms and soles of the feet), and fever and swollen glands. People with secondary syphilis may also generally feel unwell and you may lose weight.

Again, these symptoms will typically disappear on their own, but this does not mean that the person is no longer infected or that they can no longer transmit the infection to others. Secondary symptoms usually last 3 to 12 weeks, but may persist for years until the infection moves into the latent stage. Once in the latent stage, a person may still have “relapses” in which secondary symptoms will reappear.

**Latent Infection Symptoms:**

After primary and secondary symptoms disappear, an infected person will enter a latent stage of syphilis, in which they will have no symptoms. However, this does not mean they are no longer infected, and in the early latent infection the person may still transmit the infection to others. During this time, the syphilis bacteria may continue to multiply and infect the body. A person in the latent stage may occasionally return to the symptoms of secondary infection. This latent stage may last for one year to 30 years.

**Tertiary Infection Symptoms:**

Tertiary syphilis occurs in 40% of untreated infected persons. This stage is very destructive. It is the stage at which the long-term damage caused by syphilis bacteria results in various major health complications. These complications can include major internal or external sores, serious cardiovascular and mental health problems, and damage to other organs such as the eyes and ears. In some cases, these complications can lead to death.

**Testing**

Syphilis testing is performed through a blood test, or by a swabbing from an infected sore.

**Treatment**

Syphilis can be cured with antibiotics. Remember, a person can reacquire syphilis infection, so their partner(s) should also be tested.
What is genital herpes?

Genital Herpes is caused by the Herpes Simplex Virus (HSV) which is from the same family of viruses that cause cold sores. Cold sores are generally caused by a type of Herpes Simplex Virus called HSV-1, and genital herpes is usually caused by type HSV-2. However, both types can infect the genital areas, causing painful sores.

There is no cure for genital herpes and often people will have recurring outbreaks. During these outbreaks the infected person will have sores and symptoms for a while, then the virus will go into a dormant stage and the person will have no symptoms again until the next outbreak. The number of outbreaks and the amount of time between outbreaks varies from person to person. Some people may have them frequently and others may have only one or two. It is still possible to transmit the virus during the dormant stages when a person has no symptoms.

How do you get genital herpes?

Genital Herpes is spread through skin-to-skin contact with an infected area, typically during oral, anal or vaginal sex. In rare cases, a herpes infection can be spread from mother to child during birth. Active cold sore infections of HSV-1 can also be transmitted through kissing. When transmitted through oral sex, a herpes infection can be passed both ways - from mouth to genitals, or from genitals to mouth. The herpes virus is not spread through shared toilet seats, swimming pools, hot tubs or bathtubs.

Preventing genital herpes

- Condoms can help prevent HSV. However, because HSV can be passed from skin-to-skin contact, condoms likely offer less protection against HSV than against most other sexually transmitted infections.
- Use condoms and dental dams for protection during oral sex.
- Avoid sex when a person is visibly infected.
- Avoid oral sex with a person who has had a cold sore recently.
- Remember, an infected person can pass the virus even when they have no visible infection, so use protection such as condoms is always important.

Symptoms

Many people with HSV may have no symptoms or only mild symptoms. For those with symptoms, an active genital herpes infection may be visible and very embarrassing.

Symptoms for both men and women include:

- Itchiness of genitals
- Small blisters in the vagina or on the vulva or cervix; on or around the penis or testicles; on or around the anus; or on the thighs or buttocks
- Tender lumps on the groin (especially at the time of the first episode)
- The first episode may be accompanied by fever or headaches.
- Blisters often burst leaving painful sores. These sores may dry up leaving scabbing which may fall off
- Painful urination
- A slight tingling or burning may be a sign that an active outbreak is coming

Symptoms typically appear within 2 to 20 days of infection. For those with symptoms, outbreaks may occur frequently during the first few years after infection. As time goes by, these outbreaks are likely to become less common.

Infection from oral sex can cause sores inside the mouth or on the lips of both men and women. Though infection is commonly on or around the mouth or genitals, HSV can sometimes cause outbreaks of sores on the skin elsewhere on the body.

Testing

Testing for Herpes is performed by taking a tissue scraping sample or by taking a culture of an active sore or blister. A blood test can also detect HSV-1 or HSV-2 infections.

Treatment

There is no cure for Herpes, but effective treatments for outbreaks do exist. To be effective these treatments must be started immediately after symptoms appear. Outbreaks of sores may appear again and again throughout a person’s life. Medication can be taken to make these outbreaks less common, and to treat the sores themselves.

Managing the symptoms of genital herpes infection:

- Wear loose clothing during outbreaks
- Drinking large amounts of fluids will decrease pain during urination, and urinating in the bath may be less painful
- Wash your hands with soap and water if you touch an infected area, and in particular, do not rub your eyes or touch your mouth after touching infected skin
- Avoid further infection by keeping the infected area clean and dry. When drying actively infected areas, use a hair dryer or lightly pat the area dry
- Epson salts in bath water can help clean and dry out infected areas
- Wear bath towels before reusing and wash underclothing frequently
- A healthy lifestyle including proper diet, adequate rest and low stress levels can improve your immune system, and reduce the likelihood of outbreaks
- If you think you have herpes, see a doctor immediately. Medication is available to help treat infected areas and to reduce the pain of sores. This medication may be prescribed for outbreaks as they happen, or it may be taken regularly to suppress the virus and lower the chance of having an outbreak.

Long-term impact

There is no cure for Herpes, but frequency and severity of infections can be partially managed with medication. By themselves, HSV-1 and HSV-2 are generally not considered a serious health risk. However, in very rare cases, the Herpes Simplex Virus can cause serious illness. Infected pregnant women can pass the virus to infants during birth, causing lesions and possibly life-threatening infections of the central nervous system of the baby. In a very small number of cases HSV can cause meningitis or encephalitis (inflammation of the brain), and herpes infection of the eye can cause scarring of the cornea and even blindness. Because Herpes can cause sores on the penis or inside the vagina, it also increases the risk of transmission of HIV, the virus that causes AIDS.
What to tell your partner

For a few reasons, Herpes may be more difficult to talk about than other STIs: it is incurable, it can be transmitted through oral sex, and condoms do not completely protect against transmission.

For an existing partner, there is a chance they may already have the virus but they may experience no symptoms or only mild symptoms.

If you are diagnosed with the herpes simplex virus, it is important that your partner be tested even if he or she does not have symptoms.

When can I have sex again?

Having Genital Herpes does not mean your sex life is over, but it is an incurable, contagious infection. It can be transmitted through oral sex, and can be transmitted when you have no symptoms. Condoms will help reduce this risk but may not cover all infected areas. So, when deciding to have sex, you and your partner will have to accept a certain amount of risk. It is your responsibility to inform your partner of this risk.

If you have herpes, safer sex should always be practiced. Avoid having sex when you have an active infection. Ask your health care provider for more information about having sex while infected with HSV. Some suppression medications for Herpes may also lower the risk of transmitting the virus.

Oral sex can transmit the virus both ways (from mouth to genitals or from genitals to mouth) so protection is very important for both partners. Male partners should always wear condoms when receiving oral sex. For women, a dental dam or a condom cut lengthwise should be placed over her genitals to form a barrier between mouth and skin.

16. Human Papilloma virus (HPV)

What is HPV?

HPV infects the body inside and outside:

The human papillomavirus or HPV is one of the most common family of viruses in the world today. HPV is also the world’s most common sexually transmitted infection and is transmitted by skin-to-skin (including sexual) contact. HPV infects cells inside and outside of the body. These include surfaces of the skin, lining of the mouth, tongue, throat, tonsils, vagina, penis, cervix, and anus.

Most people who get HPV don’t have any signs or symptoms and may unknowingly spread the disease. HPV is not related to HIV (the human immunodeficiency virus, which can cause AIDS). However, people with HIV have weakened immune systems and are therefore likely to be infected with various germs, including one or more types of HPV.

Different health risks caused by different types

There are many different types of HPV viruses. Over 80 types of HPV have been reliably identified, but researchers believe there are likely over 200. Some types of HPV can cause common skin warts and plantar warts (warts on the soles of the feet), while over 30 other types of HPV affect the anogenital tract (on or between the anus and genitals).
Of those HPV types that can cause genital infections:

- Some types (such as 16 and 18) can cause pre-cancerous lesions, cervical cancer and other genital cancers and are referred to as carcinogenic or 'high-risk HPV types'.
- Other types (such as 6 and 11) can lead to genital warts and are referred to as 'low-risk HPV types' because they rarely cause cancer.

Skin warts

The most visible types of HPV are skin warts (common, plantar or flat) that develop on areas of the skin such as the hands, arms, legs and bottom of the feet. HPV infections of this type are very common, harmless, non-cancerous, and easily treated.

Genital warts

Not to be confused with skin warts, genital warts (also known as condylomata acuminatum) are mostly caused by HPV types 6 and 11. In women, genital warts can appear on the vulva, urethra, cervix, anus or thighs. In men, they can appear on the penis, scrotum, anus or thighs.

Pre-cancerous lesions

In women, HPV can infect cells on the vagina and cervix where they can’t be seen. These lesions (medically known as dysplasia, or abnormal cells of the cervix) are considered to be a pre-cancerous condition. HPV is one of the most frequent causes of cervical dysplasia. There are three types of cervical dysplasia: mild, moderate and severe. Left untreated, dysplasia can progress to cervical cancer.

Cancers

Carcinogenic types of HPV cause most cervical cancers and 70% are caused by HPV types 16 and 18. These types may also be linked to oral and penile cancers. Research has shown a strong link between anal cancer and HPV 16.

Transmission and natural history of HPV

HPV is not transmitted by blood. The most common means of transmission is by skin-to-skin contact with the penis, scrotum, vagina, vulva, or anus of an infected person. Kissing or touching a partner’s genitals with the mouth can also transmit HPV. Using a condom does not guarantee protection since the virus can be on an area of skin not covered by the condom.

HPV is usually acquired at a young age at the time of sexual debut, typically measured as the age of 'first intercourse'. Research shows that sexual debut for young Canadians (male and female) can be as young as 15 years of age and it has been reported that oral sex is practised by girls as young as 12 and 13 years old, regardless of their social or economic background.

Genital warts are very contagious and are spread during oral, vaginal or anal sex with an infected partner:

- Most people (66%) who have sexual contact with a partner infected by genital warts will develop warts themselves, usually within three months of contact.
- Genital warts can cause problems during pregnancy:
  - Sometimes they get larger, making it difficult to urinate.
  - They can make the vagina less elastic and cause obstruction during delivery.
- In rare cases infants born to women with genital warts develop warts in their throats - a potentially life-threatening condition for the child.
- Genital warts may last for years and eventually go away. Even if this happens the HPV virus can remain dormant in the body and the manifestation can return at a later date.
- The natural course taken by an HPV infection varies over time and from one person to another:
  - Genital warts can develop quickly inside or outside the vagina, usually within three months of contact with an infected person.
  - Within one year of initial HPV infection, low-grade cervical dysplasia (CIN 1) may develop (CIN stands for cervical intraepithelial neoplasia and is a system of classifying cervical lesions: CIN 1 = mild, CIN 2 = moderate, CIN 3 = severe).
  - In some women the HPV infection persists and can lead to the beginning stages of cancer (CIN 2-3) - this transformation is generally slow and can take anywhere from five years to a lifetime.

Symptoms - physical and psychological

17. Genital warts

Though usually painless, symptoms for genital warts include:

- Itching or burning sensation and occasional minor bleeding as a result of anal sex or bowel movement.
- The cauliflower-like growths are unsightly and embarrassing and associated with a high incidence of depression, sexual dysfunction and disruptions to long-term relationships.
- Research conducted among people with visible genital warts and who were diagnosed with HPV reported feelings of:
  - Depression, shame, guilt;
  - Fear of rejection by their partner, loss of sexuality and enjoyment of sex.

Pre-cancerous lesions

Cervical dysplasia seldom causes any noticeable symptoms. It is usually detected through a Pap test (smear) or colposcopy. HPV infection has social and psychological consequences. Studies of women who have received abnormal Pap test results indicate that they often experience
psychological consequences including:

- Anxiety, fears about cancer;
- Sexual difficulties;
- Changes in body image;
- Concerns about loss of reproductive functions.

Treatments and strategies for prevention

**Vaccination against HPV**

Vaccination to prevent the most common types of HPV infection and cancer of the cervix is now available in Canada. The Government of Canada has approved vaccination for females between the ages of 9 and 26, and studies show that the vaccination is 100% effective in stopping four types of HPV infection. These four types of HPV can cause:

- pre-cancerous changes and cancers of the cervix, vulva and vagina (types 16 and 18), as well as
- genital and anal warts (types 6 and 11).

These four types of HPV cause 70% of all cancers of the cervix and 90% of genital warts, and associated diseases such as cancers of the vagina and vulva. The HPV vaccination does not stop you from getting other sexually transmitted infections. Even when you have been vaccinated, you should always use a condom during sex to protect yourself.

Regarding treatment, unlike bacteria, viruses cannot be destroyed with antibiotics, and there is currently no medical cure to eliminate an HPV infection. Treatment depends on the type of HPV infection and in the case of cervical cancer the stage of development.

**Genital warts**

Trying to remove the visible warts does not always eliminate HPV and genital warts can reappear. Chemical treatment methods can be painful, embarrassing and may cause scarring. Two powerful chemicals (podophyllin and trichloroacetic acid) are capable of destroying external genital warts with direct application, but this must be repeated several times. A new product, Imiquimod cream, is now available and has had some success at stimulating the immune system to fight the virus. Depending on the size, number of warts and where they are located, other methods for removal of external warts include:

- Cryotherapy (damaged cells are killed by freezing them with liquid nitrogen);
- Electrosection (passing an electric current through abnormal cells);
- Laser therapy (super heats and vaporizes abnormal cells).

**18. Cervical cancer**

Early-stage cervical cancer can usually be treated successfully. Options at this stage can include LEEP (loop electrosurgical excision procedure - the removal of tissue using a hot wire loop), laser therapy or cryotherapy. If the cancer has invaded deeper layers of the cervix and has spread to the uterus, more extensive treatment may be involved such as a radical hysterectomy with lymph node removal. Side-effects associated with this procedure include: inability to control urination, sexual problems, psychological stress, and swelling in the legs.

Later-stage disease kills by invading nearby tissues. There are some benefits from chemotherapy and radiation therapy. Disease that has spread beyond the pelvis is generally regarded as incurable since the survival rates are about one in five. Cervical cancer can be prevented through detection and treatment, but the ideal solution is to prevent the infection that causes it - HPV.

At present, it is almost impossible to break the chain of communicability by stopping unprotected sexual activity. Even when condoms are used, they cover only the penis (or the outer edge of the vagina in the case of the female condom) and other anogenital skin contact can occur. Also, some people are allergic to latex; they use condoms made of sheep intestine instead, but these condoms have pores large enough to let small bacteria and viruses such as HPV through.

Vaccination would be another prevention strategy that would dramatically change the HPV landscape. Researchers are currently working on vaccines to prevent HPV infections that can cause cervical cancer and genital warts.

19. **Trichomoniasis (Trich)**

**What is trichomoniasis?**

Trichomoniasis, or trich (pronounced “trick”), is a common STI that usually has very few symptoms. It is caused by an infection of microscopic parasites called *Trichomonas vaginalis*. For women, these parasites may infect the vagina, urethra, bladder or cervix. In men, the infection is usually in the urethra, or under the foreskin of uncircumcised men.

**How do you get trichomoniasis?**

Trichomoniasis is spread through sexual contact with an infected person.

**Prevention**

The best way to help prevent Trichomoniasis is to use a condom each and every time you have sex.

**Symptoms**

Many people, particularly men, will not have symptoms of a trich infection. If symptoms do appear, they usually appear within one week of infection, though they can take up to six months. For some people, symptoms may go away and then return later.

In men, trichomoniasis is rare and most men will not have symptoms.
For men symptoms may include:

- mild discharge
- irritation or redness at the top of the penis
- burning during urination
- Men may often become unknowing carriers of trich infections. Treatment is required to ensure that a trich infection is completely gone.

About half of women will have symptoms of a trich infection.

For women, symptoms may include:

- Discharge from the vagina
- Vaginal odour
- Pain during intercourse or urination
- Irritation or itchiness of the vagina

Testing

Testing may be done by physical examination or lab testing to detect the parasite. In some cases, the tiny sores caused by trichomoniasis may be detected during a routine pap test for women; however, pap smears do not specifically test for sexually transmitted infections, and you should never rely on a pap smear to detect trichomoniasis or any other sexually transmitted infections.

Treatment

Typically, trichomoniasis can be treated with a single oral dose of an antibiotic called Metronidazole. However, Trichomonas can be reacquired easily so it is important that you and your partner(s) be treated together. Trichomoniasis may not show symptoms, so even if your partner doesn’t have symptoms, he or she should still be tested.

Did You Know?

**STI Reinfection:**

In 2006, a study followed 2419 people who had attended an STI clinic. Every three months following their visit to the clinic, the study's participants were retested for chlamydia, gonorrhea and trichomonas. The study found that about one in four of the women and about one in seven of the men tested positive for at least one new STI within the next year.

Impact if not treated

In rare cases, trichomoniasis can cause pelvic inflammatory disease (PID) in women, which can cause infertility, chronic pelvic pain or ectopic pregnancy. If a pregnant woman is infected with Trichomonas, it may cause premature delivery or low birth weight. Trich can cause small sores and inflammation, which can increase the risk of HIV transmission. Detection and treatment of a Trichomonas infection will help lower your risk of contracting HIV.

What to tell your partner

Trichomoniasis is easily treated, but your partner(s) may not have symptoms. Also, if you’re with a partner who’s infected, they can reinfect you after you’ve had treatment. Telling a partner about a trichomoniasis infection may be embarrassing, but it’s important to be very honest with your partner(s). Let them know so that they can get tested and treated if necessary.

When can I have sex again?

Ask your healthcare professional when receiving treatment about when you can have sex again. Do not have sex again if you or your partner(s) have not fully completed treatment, or if you are still displaying symptoms of infection. Remember, you can become reinfected immediately after your infection clears up. As always, it’s a very good idea to use condoms to help prevent sexually transmitted infections and trichomoniasis reinfection.

20. Crabs (A.K.A. Public Lice)

What are Crabs / Public Lice?

Measuring in at about a millimetre tall, pubic lice (phthirus pubis) are tiny crab-like insects that nest in pubic hair. They bury their heads into the skin and live off human blood, laying their egg sacks (nits) near the base of the pubic hairs. A substance they secrete into the skin can cause intense itching, and the bites of adult lice turn small patches of skin to a bluish-grey colour. Unlike head lice, pubic lice have small, wide bodies and arms that resemble crabs. These lice can also be found in chest, armpit and facial hair, eyebrows and eyelashes.

How are Crabs / Public Lice spread?

Pubic lice can be spread during intimate contact. They do this by crawling from one person to another, since they have no wings. Pubic lice also can live for one to two days in bedding, towels and clothing belonging to an infected individual, and these items can be a source of transmission. Lice are not related to poor hygiene. Anyone can get lice, though it’s most common among sexually active people and in situations where individuals are in close contact.

Prevention

• Avoid sharing towels and clothing that have not been washed.
• If it can’t be washed, vacuum it.
• When trying on underwear or a bathing suit at the store always wear something underneath.

Symptoms

• Pubic lice and nits are small and can be difficult to spot. Infected individuals may experience:
  • Skin irritation and inflammation accompanied by itchiness and redness.
  • Small blue spots on the skin where lice have bitten.
  • Louse feces, fine black particles, in the infected person’s undergarments.

Testing

Healthcare professionals inspect the area for the crabs and the small greyish-white eggs they lay. Adult lice can easily be identified just by looking at the area with a magnifying glass, or viewing a sample of the area under a microscope.

Treatment

• Non-prescription shampoo that can be purchased at a pharmacy, clinic or doctor’s office. Usually one wash is all it takes. In cases where a second washing is needed, apply it four days after the first treatment. The pharmacist will be able to help you
• A fine-toothed comb or the fingernails can be used to scrape the eggs off the hairs.
• It’s important to tell recent sex partners so they can be treated at the same time.
• Clothes, bedding, and other possible contaminated items should be washed in hot water or dry cleaned, or bagged for a week. Items that cannot be washed or bagged should be vacuumed.
• Shaving may not necessarily get rid of the problem

Impact of not treated

• It won’t go away on its own.
• Persistent scratching of irritated skin can cause a secondary bacterial infection.

What to tell your partner

Pubic lice are easily treated, but your partner(s) may not know they have them. Telling a partner about pubic lice may be embarrassing, but it’s important to be very honest with your partner(s). All sexual partners who have had contact with an infected person in the month before diagnosis should be tested and treated to help prevent reinfection. If you’re with a partner who’s infected, they can reinfect you after you’ve had treatment, so it’s best to get treated at the same time.

When can I have sex again?

Ask your healthcare professional when receiving treatment about when you can have sex again.
Do not have sex again if you or your partner(s) have not fully completed treatment, or if you are still displaying symptoms of infection. Remember, you can become reinfected immediately after your infection clears up.

21. Yeast Infections

What is a vaginal yeast infection?

A vaginal yeast infection is a common fungal infection caused by overgrowth of Candida, naturally occurring yeast. Yeast are normally found in a woman’s vagina in small numbers, but sometimes they can multiply and change the normal balance of bacterial growth. When the fungi begin to grow in excess, they may develop into candidiasis.

These are the most likely fungi to cause yeast infections as well as infections in other moist areas of the body, such as the mouth (thrush), skin folds, and beneath the fingernails.

What are the risk factors for getting a yeast infection?

- Pregnancy
- Birth control pills
- Menstruation
- Recent or current use of antibiotics and certain other prescription medications
- Unprotected sexual activity
- Mismanaged diabetes
- A weakened immune system
- Often we don’t find the cause

What are the symptoms of yeast infections?

Women may experience:

- Vaginal itching
- Burning while urinating
- Pain during intercourse
- Swollen or red vulva
- Thick, white discharge resembling cottage cheese

Men with an infection may develop balanitis, an inflammation of the head of the penis, and may experience:

- Painful swelling on the tip of the penis
- Itching
- Red dots on the tip of the penis
- Dry peeling skin

Burning during urination

Is a yeast infection a sexually transmitted infection (STI)?

A yeast infection (or candidiasis) is not considered a sexually transmitted infection. In fact, they are a very common and normal part of women’s lives. An estimated three in four women will have a yeast infection in their lifetime, and many of these women will have recurring infections. In rare cases, a yeast infection can be spread through vaginal intercourse among partners who have unprotected sex, but the risk is low. Like any other vaginal infection, they should be treated immediately, and if you are sexually active and your partner is having symptoms, he or she should also seek treatment. In any case, sex should only resume once symptoms disappear.

Women commonly misdiagnose themselves with yeast infections when they need to be treated for other conditions. Recurring yeast infections can sometimes be a sign of an STI or some other condition that requires treatment, such as a bacterial infection. If you or your partner frequently experience some of the symptoms, it’s advisable to get tested to rule out STIs.

What if I experience any of the symptoms?

If you think you may have a yeast infection, but have never had one before, it is a good idea to see a health-care professional the first time to be diagnosed correctly before trying an over-the-counter treatment. It’s important to establish that they are truly yeast infections. Some women have a different vaginal discharge just before their period, and if it is itchy or irritating, it may be perceived as a yeast infection. There are many other things that can cause the same symptoms, and yeast creams may not fix the symptoms or can make them worse.

If the yeast species is resistant to the treatment used, the infections can recur, or never go away. In this case, your doctor can look for yeast under the microscope to confirm the diagnosis and can culture the yeast with a vaginal swab if the organism is resistant to treatment. Women who have confirmed recurrences of yeast infection in the week before menstruation can often get relief by taking a single tablet of a prescription medication each month about the time the infections have been recurring. Recurrent candidiasis (yeast infections) affects 5-8% of pre-menopausal women.

If you have a yeast infection, you and your partner should both abstain from sexual activity until the infection has been treated, or else you risk further irritating the vagina or reinfecting each other.

How are yeast infections treated?

Most yeast infections can be treated with over-the-counter antifungal (local) medications, but it’s recommended you consult a health care professional before trying anything, especially if you are pregnant. Talk to a health-care practitioner about all the prescription and non-prescription drugs you are taking before you start any treatment. Burning of the genital area and rash after application is a common side effect of the treatment.

Once the yeast infection is confirmed, it is usually easily treated by over-the-counter treatments or prescription medications. Over-the-counter treatments are easily available and usually less expensive, such as tablets or suppositories that are inserted into the vagina, or ointments and creams (clotrimazole) that can be applied directly to the infected area for one to seven days.
Prescriptions are typically taken in pill form and usually cure the infection faster, although they have more side effects like nausea and vomiting and are more expensive.

Some women do get cyclic yeast infections based on hormonal changes in the vagina. In this case, your options would include:

- Continue to treat the yeast infection each month
- Get the yeast infection pill (fluconazole) from your doctor and take it each month in the week before your period to prevent a yeast infection
- A yeast-free diet is also a treatment method for recurring yeast infections.

How do I prevent another infection?

A well-balanced diet with plenty of fibre can be the best preventative medicine. Wear loose dry clothing and avoid wearing wet clothing for extended periods of time.

Women can also take hygienic precautions to decrease the likelihood of developing an infection:

- Keep your genitals clean and dry, and rinse well after using soap.
- Avoid vaginal douching after sex.
- Never put anything in your vagina after it has been in your anus. After using the washroom, wipe from front to back.
- Avoid vaginal deodorants and perfume products such as soaps that can irritate the vagina.
- Wear underwear made of cotton instead of synthetic fabrics.

22. Morgellons

After years of debate and controversy, the CDC is finally looking into the mysteries of Morgellons, an unexplained and debilitating skin condition that many doctors don’t believe exists.

Images courtesy Morgellons.org

Strange Symptoms: The lip of a three-year-old (left) whose parents believe he may have

Morgellons, and facial skin removed from a child (right, magnified photo)

By Jenny Hontz

Deanna Odom was either delusional or she was suffering from a bizarre and devastating illness that doctors cannot treat. In December 2004 the 36-year-old mother of two teenagers started developing lesions on her arms, legs and backside. At times, she says, it felt as if needles were stinging her. And then she noticed strange, colored fibers emerging from her skin. “They would almost look like dust fibers,” says Odom, who lives in Torrance, Calif. “I would put my hands together and my hands would puff off the fibers. Combing my head, you could see the fibers emerging. It’s literally almost out of a sci-fi movie. You think, ‘This isn’t happening’.”

After seeing a TV news report in February 2005, Odom became convinced she was suffering from Morgellons, an unexplained condition that has sparked debate and controversy within the medical community. Some doctors and researchers believe Morgellons is an emergent disease characterized by nonhealing skin lesions, crawling or itching sensations, fibers and black granules emerging from the skin, and neurological impairments such as short-term memory loss. The problem, for Odom and thousands of others who believe they suffer from the disease, is that most dermatologists think there is no such thing as Morgellons. They attribute the suffering of patients like Odom to delusions or anxiety-driven self-mutilation.

Now the Centers for Disease Control and Prevention (CDC) have launched their first study of Morgellons, which may provide some answers as early as next year. Michele Pearson, the CDC’s principal investigator, says the agency got involved after receiving an increasing number of calls—averaging about 100 a month since November 2006—from patients, doctors, public health officials and members of Congress asking the CDC to look into Morgellons, which the agency describes as “an unexplained skin condition.”

Patients in the study will undergo medical, dermatological and psychological examinations, including blood tests and skin biopsies. The study will be conducted in conjunction with Kaiser Permanente’s Northern California Division of Research. Any fibers collected will be analyzed by the Armed Forces Institute of Pathology, which has both forensics capabilities and an environmental research lab. “We are absolutely going into this with an open mind,” Pearson says.

But many doctors have already formed their own opinions about Morgellons. Jeffrey Meffert, a dermatologist and associate clinical professor at the University of Texas Health Science Center in San Antonio, is a vocal Morgellons skeptic, often debunking the disease in presentations to colleagues. He says he sees at least one patient a month claiming to have Morgellons, but he diagnoses most of them with prurigo nodularis, a condition sometimes fueled by anxiety and characterized by chronic itching and scratching, which creates hardened nodules on the skin. More rarely, he says, patients have the mistaken belief that they are infested with parasites.

“People with delusional parasitosis are very functional and rational except when it comes to this one issue,” he says. “Many dermatologists would rather these patients never show up, because they don’t feel they have the time to spend. No one knows how to deal with them.”

That attitude is a familiar one to Odom, who visited seven doctors between January 2005 and April 2006, trying to discover what was wrong with her. By that time the lesions had spread to her head, causing her hair to fall out in patches. Some of the doctors she saw diagnosed her with dermatitis, but most thought the problem was psychological and assumed she was scratching her skin and pulling out her own hair.

One prescribed Zoloft for depression, while others prescribed the anti-anxiety drug Xanax. (She refused to take the drugs.) One dermatologist (not Meffert) diagnosed her with delusional
parasitosis. “He told me, ‘You seem a little obsessed. Maybe you should go speak to somebody’,” she says.

Odom, a former softball coach and school aide, never doubted her mental health, although she acknowledges she grew “frantic and high strung” after realizing her doctors didn’t believe her. She began isolating herself, fearing she might be contagious. “The worst fear for me was whether I was going to infect my children,” she says. “I stopped hugging them and kissing them. I had a hard time preparing their food, thinking whatever I’m spewing out of my body is going to get into what I’m cooking.”
Worldwide reports of Morgellons Disease

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24. Entamoeba Histolytica (Amebiasis/Amebic Dysentery)

Free-living protozoan groups that inhabit soils and natural waters are extremely diverse, not only in their structure but also in the manner in which they feed, reproduce, and move. The amoebas are a diverse group of free-living protozoa that probably evolved from a number of different primitive protozoan ancestors. The amoeboid group includes hundreds of different organisms, ranging in size from about .25 to 2.5 mm (about 0.0098 to 0.098 in). Amoebas are considered the most primitive animals and are classified in the kingdom Protista. All amoeboid organisms have thin cell membranes, a semirigid layer of ectoplasm, a granular, jellylike endoplasm, and an oval nucleus. Some species live on aquatic plants and some in moist ground; others are parasitic in animals and humans.

At least six forms of amoeba are parasitic in humans. Most important of these is Entamoeba histolytica, which causes amebiasis and dysentery. The diseases often occur in epidemics when raw sewage contaminates water supplies or when soil is fertilized with untreated wastes.

Amebic dysentery is most commonly spread by water or contaminated, uncooked food or from carriers. Flies may carry the cysts to spread the amoeba from the feces of infected persons to food. In many publications Entamoeba histolytica is cited as infecting one tenth of the world population, or 500 million people.

Life Cycle Diagram (Courtesy of the DPD)

Infection by Entamoeba histolytica occurs by ingestion of mature cysts (1) in fecal contaminated food, water, or hands. Excystation (2) occurs in the small intestine and trophozoites (3) are released, which migrate to the large intestine. The trophozoites multiply by binary fission and produce cysts (4), which are passed in the feces. Because of the protection conferred by their walls, the cysts can survive days to weeks in the external environment and are responsible for transmission. (Trophozoites can also be passed in diarrheal stools, but are rapidly destroyed once outside the body, and if ingested would not survive exposure to the gastric environment.)

In many cases, the trophozoites remain confined to the intestinal lumen (A: non-invasive infection) of individuals who are asymptomatic carriers, passing cysts in their stool. In some patients the trophozoites invade the intestinal mucosa (B: intestinal disease), or through the bloodstream, extra intestinal sites such as the liver, brain, and lungs (C: extra-intestinal disease), with resultant pathologic manifestations. It has been established that the invasive and non invasive forms represent two separate species, respectively E. histolytica and E. dispers, however not all persons infected with E. histolytica will have invasive disease.

These two species are morphologically indistinguishable. Transmission can also occur through fecal exposure during sexual contact (in which case not only cysts, but also trophozoites could prove infective).
25. Human Mycoses

Fungi cause a wide variety of diseases in humans, and the areas we discuss are listed below. You may also want to refer to the Infectious Disease Society of America–Mycoses Study Group (IDSA-MSG) Practice Guidelines for treating invasive mycoses. These cover aspergillosis, blastomycosis, candidiasis, coccidioidomycosis, cryptococcosis, histoplasmosis, and sporotrichosis and are available at the IDSA website. Finally, please be sure to refer to our legal disclaimer.

(Site development note: our discussions are currently relatively superficial for all the infections except candidiasis.)

- Aspergillosis
- Blastomycosis
- Candidiasis
- Coccidioidomycosis
- Cryptococcosis
- Histoplasmosis
- Paracoccidioidomycosis
- Sporotrichosis
- Zygomycosis

Miscellaneous Syndromes

These diseases are a little harder to classify as some of them are caused by one of several different fungi. Thus, even though they have a fungal-sounding name (e.g., Tinea barbae), you can’t always expect to find a corresponding fungus named Tinea barbosa!

Chromoblastomycosis

Eye Infections

Lobomycosis

Mycetoma

Nail, Hair, and Skin disease

- Onychomycosis (Tinea unguium)
- Piedra
- Pityriasis versicolor
- Tinea barbae
- Tinea capitis
- Tinea corporis
- Tinea cruris
- Tinea favosa
- Tinea nigra
- Tinea pedis

Otomycosis

Phaeohyphomycosis

Rhinocryptosis
There are four common fungi causing allergies in humans: Cladosporium, Penicillium, Aspergillus and Alternaria. *Alternaria alternata* is an important cause of mould allergies in humans. It fruits in abundance over the surface of dying grasses and cereals. It is particularly common on corn leaves in the late fall when the straw-coloured leaves turn black with spores (conidia). Spores are dislodged during harvesting of the crop and are produced in such abundance (billions) that they form a dark cloud above the combine. Spores can affect sensitized individuals for many miles downwind. Alternaria is also found from time to time growing in damp spots on walls in homes, particularly in basements but it is not common.
The SCIO can be prescribed for HOME USE to help your children with autism, attention difficulties, superlearning, sports, injury, pain, relaxation....

Monthly rental fees can be as low as 350 Euro a month. Contact your SCIO therapist for information...

Maitreya Kft.
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Mosquito (from the Portuguese meaning “small fly”) is a common flying insect in the family Culicidae that is found around the world. There are about 3,500 species of mosquitoes. They have a pair of scaled wings, a pair of halteres, a slender body, and six long legs. The females of most mosquito species suck blood (hematophagy) from other animals, which has made them the deadliest disease vector known, killing millions of people over thousands of years and continuing to kill millions per year by the spread of infectious diseases.

1. Development

Mosquitoes go through four stages in their life cycle: egg, larva, pupa, and adult or imago. The first three stages are aquatic and last 5–14 days, depending on the species and the ambient temperature. The adult females can live up to a month (or more in captivity) but most probably do not live more than 1–2 weeks in nature.

1.1 Larvae

Mosquito larvae have a well-developed head with mouth brushes used for feeding, a large thorax with no legs and a segmented abdomen. Larvae breathe through spiracles located on the 8th abdominal segment and therefore must come to the surface frequently. The larvae spend most of their time feeding on algae, bacteria, and other microorganisms in the surface microlayer. They dive below the surface only when disturbed. Larvae swim either by jerky movements of the entire body, explaining their nickname “wigglers”, or through propulsion with the mouth brushes. Larvae also like very warm temperatures.

Larvae develop through 4 stages, or instars, after which they metamorphose into pupae. At the end of each instar, the larvae molt, shedding their exoskeleton, or skin, to allow for further growth.

1.2 Pupa

The pupa is comma-shaped in Anopheles when viewed from the side. The head and thorax are merged into a cephalothorax with the abdomen curving around underneath. As with the larvae, pupae must come to the surface frequently to breathe, which they do through a pair of respiratory trumpets on the cephalothorax. After a few days as a pupa, the dorsal surface of the cephalothorax splits and the adult mosquito emerges.

1.3 Adult

Adults of the yellow fever mosquito Aedes aegypti, a typical member of the subfamily Culicinæ. The male on the left, females on the right. Note the bushy antennae and longer palps in the male.

The duration from egg to adult varies considerably among species and is strongly influenced by ambient temperature. Mosquitoes can develop from egg to adult in as little as 5 days but...
usually take 10–14 days in tropical conditions. The variation of the body size in adult mosquitoes depends on the density of the larval population and food supply within the breeding water. Adult flying mosquitoes frequently rest in grass, shrubbery or other foliage.

Adult mosquitoes usually mate within a few days after emerging from the pupal stage. In most species, the males form large swarms, usually around dusk, and the females fly into the swarms to mate.

Adult mosquitoes usually mate within a few days after emerging from the pupal stage. In most species, the males form large swarms, usually around dusk, and the females fly into the swarms to mate.

Males live for about a week, feeding on nectar and other sources of sugar. Females will also feed on sugar sources for energy but usually require a blood meal for the development of eggs. After obtaining a full blood meal, the female will rest for a few days while the blood is digested and eggs are developed. This process depends on the temperature but usually takes 2–3 days in tropical conditions. Once the eggs are fully developed, the female lays them and resumes host seeking.

The cycle repeats itself until the female dies. While females can live longer than a month in captivity, most do not live longer than 1–2 weeks in nature. Their lifespan depends on temperature, humidity, and also their ability to successfully obtain a blood meal while avoiding host defenses.

2. Morphology

Length varies but is rarely greater than 16 mm (0.6 in), and weigh up to 2.5 mg (0.04 grain). A mosquito can fly for 1 to 4 hours continuously at up to 1-2 km/h travelling up to 12 km (7.5 mi) in a night.

All mosquitoes have slender bodies with 3 sections: head, thorax and abdomen.

2.1 Head

The head is specialized for acquiring sensory information and for feeding. The head contains the eyes and a pair of long, many-segmented antennae. The antennae are important for detecting host odors as well as odors of breeding sites where females lay eggs. In all mosquito species, the antennae of the males in comparison to the females are noticeably bushier and contain auditory receptors to detect the characteristic whine of the female. The compound eyes are distinctly separated from one another. Their larvae only possess a pit-eye ocellus. The compound eyes of adults develop in a separate region of the head. New ommatidia are added in semicircular rows at the rear of the eye; during the first phase of growth, this leads to individual ommatidia being square, but later in development they become hexagonal. The hexagonal pattern will only become visible when the carapace of the stage with square eyes is molted. The head also has an elongated, forward-projecting stinger used for feeding, and two sensory palps. The maxillary palps of the males are longer than their stingers whereas the females’ maxillary palps are much shorter. (This is typical for representatives of subfamilies.) As with many members of the mosquito family, the female is equipped with an elongated proboscis that she uses to collect blood to feed her eggs.

2.2 Thorax

The thorax is specialized for locomotion. Three pairs of legs and a pair of wings are attached to the thorax. The insect wing is an outgrowth of the exoskeleton.

2.3 Abdomen

The abdomen is specialized for food digestion and egg development. This segmented body part expands considerably when a female takes a blood meal. The blood is digested over time serving as a source of protein for the production of eggs, which gradually fill the abdomen.

3. Feeding habits

Both male and female mosquitoes are nectar feeders, but the females of many species are also capable of hematophagy (drinking blood). Females do not require blood for their own survival, but they do need supplemental substances such as protein and iron to develop eggs.

In regards to host location, carbon dioxide and organic substances produced from the host, humidity, and optical recognition play important roles. In Aedes the search for a host takes place in two phases. First, the mosquito exhibits a nonspecific searching behavior until the perception of host stimulants then it follows a targeted approach.

Mosquitoes are crepuscular (dawn or dusk) feeders. During the heat of the day most mosquitoes rest in a cool place and wait for the evenings. They may still bite if disturbed. Mosquitoes are adept at infiltration and have been known to find their way into residences via deactivated air conditioning units.

Prior to and during blood feeding, they inject saliva into the bodies of their source(s) of blood. Female mosquitoes hunt their blood host by detecting carbon dioxide (CO2) and 1-octen-3-ol from a distance.

Aedes aegypti vector of dengue fever and yellow fever

Mosquitoes of the genus Toxorhynchites never drink blood. This genus includes the largest extant mosquitoes, the larvae of which prey on the larvae of other mosquitoes. These mosquito eaters...
have been used in the past as mosquito control agents, with varying success.

3.1 Saliva

In order for the mosquito to obtain a blood meal it must surmount the vertebrate physiological responses. The mosquito, as with all blood-feeding arthropods, has evolved mechanisms to effectively block the hemostasis system with their saliva, which contains a mixture of secreted proteins. Mosquito saliva affects vascular constriction, blood clotting, platelet aggregation, inflammation, immunity, and angiogenesis. Universally, hematophagous arthropod saliva contains at least one anticoagulant, one anti-platelet, and one vasodilatory substance. Mosquito saliva also contains enzymes that aid in sugar feeding and antimicrobial agents to control bacterial growth in the sugar meal. The composition of mosquito saliva is relatively simple as it usually contains fewer than 20 dominant proteins. Despite the great strides in knowledge of these molecules and their role in bloodfeeding achieved recently, scientists still cannot ascribe functions to more than half of the molecules found in arthropod saliva. One promising application is the development of anti-clotting drugs based on saliva molecules, which might be useful for approaching heart-related disease, because they are more user-friendly blood clotting inhibitors and capillary dilators.

It is now well recognized that the feeding ticks, sandflies, and, more recently, mosquitoes have an ability to modulate the immune response of the animals (hosts) they feed on. The presence of this activity in vector saliva is a reflection of the inherent overlapping and interconnected nature of the host hemostatic and inflammatory/immunological responses and the intrinsic need to prevent these host defenses from disrupting successful feeding. The mechanism for mosquito saliva-induced alteration of the host immune response is unclear, but the data has become increasingly convincing that such an effect occurs. Early work described a factor in saliva that directly suppresses TNF-α release, but not antigen-induced histamine secretion, from activated mast cells. Experiments by Cross et al. (1994) demonstrated that the inclusion of Ae. aegypti mosquito saliva into naive cultures led to a suppression of interleukin (IL)-2 and IFN-γ production, while the cytokines IL-4 and IL-5 are unaffected by mosquito saliva. Cellular proliferation in response to IL-2 is clearly reduced by prior treatment of cells with SGE. Correspondingly, activated splenocytes isolated from mice fed upon by either Ae. aegypti or Cx. pipiens mosquitoes produce markedly higher levels of IL-4 and IL-10 concurrent with suppressed IFN-γ production. Unexpectedly, this shift in cytokine expression is observed in splenocytes up to 10 days after mosquito exposure, suggesting that natural feeding of mosquitoes can have a profound, enduring, and systemic effect on the immune response.

T cell populations are decidedly susceptible to the suppressive effect of mosquito saliva, showing enhanced mortality and decreased division rates. Parallel work by Wasserman et al. (2004) demonstrated that T- and B-cell proliferation was inhibited in a dose dependent manner with concentrations as low as 1/7th of the saliva in a single mosquito. Depinay et al. (2005) observed a suppression of antibody-specific T cell responses mediated by mosquito saliva and dependent on mast cells and IL-10 expression. A recent study suggests that mosquito saliva can also decrease expression of interferon-α/β during early mosquito-borne virus infection. The contribution of type I interferons (IFN) in recovery from infection with viruses has been demonstrated in vivo by the therapeutic and prophylactic effects of administration of IFN-inducers or IFN, and recent research suggests that mosquito saliva exacerbates West Nile virus infection, as well as other mosquito-transmitted viruses.

Using MTENS, and TVEP the SCIO can treat the spinal area for injury and pain.

Sending in an auto-focused sophisticated pulse different for each patient based on their personal electrical needs.
3.2 Egg development and blood digestion

Two important events in the life of female mosquitoes are egg development and blood digestion. After taking a blood meal the midgut of the female synthesizes proteolytic enzymes that hydrolyze the blood proteins into free amino acids. These are used as building blocks for the synthesis of egg yolk proteins.

In the mosquito Anopheles stephensi Liston, trypsin activity is restricted entirely to the posterior midgut lumen. No trypsin activity occurs before the blood meal, but activity increases continuously up to 30 hours after feeding, and subsequently returns to baseline levels by 60 hours. Aminopeptidase is active in the anterior and posterior midgut regions before and after feeding. In the whole midgut, activity rises from a baseline of approximately 3 enzyme units (EU) per midgut to a maximum of 12 EU at 30 hours after the blood meal, subsequently falling to baseline levels by 60 hours. A similar cycle of activity occurs in the posterior midgut and posterior midgut lumen, whereas aminopeptidase in the posterior midgut epithelium decreases in activity during digestion. Aminopeptidase in the anterior midgut is maintained at a constant low level, showing no significant variation with time after feeding. alpha-glucosidase is active in anterior and posterior midguts before and at all times after feeding. In whole midgut homogenates, alpha-glucosidase activity increases slowly up to 18 hours after the blood meal, then rises rapidly to a maximum at 30 hours after the blood meal, whereas the subsequent decline in activity is less predictable. All posterior midgut activity is restricted to the posterior midgut lumen. Depending upon the time after feeding, greater than 25% of the total midgut activity of alpha-glucosidase is located in the anterior midgut. After blood meal ingestion, proteases are active only in the posterior midgut. Trypsin is the major primary hydrolytic protease and is secreted into the posterior midgut lumen without activation in the posterior midgut epithelium. Aminopeptidase activity is also luminal in the posterior midgut, but cellular aminopeptidases are required for peptide processing in both anterior and posterior midguts. Alpha-glucosidase activity is elevated in the posterior midgut after feeding in response to the blood meal, whereas activity in the anterior midgut is consistent with a nectar-processing role for this midgut region.

4. Distribution

A mosquito inside a home in Victoria, Australia

While many species are native to tropical and subtropical regions, some such as Aedes have successfully adapted themselves to cooler regions. In the warm and humid tropical regions, they are active the entire year long; however, in temperate regions they hibernate over winter. Eggs from strains in the temperate zones are more tolerant to the cold than ones from warmer regions. They can even tolerate snow and temperatures under freezing. In addition, adults can survive throughout winter in suitable microhabitats.

4.1 Means of dispersal

Over large distances the worldwide distribution is carried out primarily through sea routes, in which the eggs, larvae, and pupae in combination with water-filled used tires and cut flowers are transported around. As with sea transport, the transport of mosquitoes in personal vehicles, delivery trucks, and trains plays an important role.

5. Disease

Mosquitoes are a vector agent that carries disease-causing viruses and parasites from person to person without catching the disease themselves.

Anopheles albimanus mosquito feeding on a human arm. This mosquito is a vector of malaria and mosquito control is a very effective way of reducing the incidence of malaria.

The principal mosquito borne diseases are the viral diseases yellow fever and dengue fever, transmitted mostly by the Aedes aegypti, and malaria carried by the genus Anopheles. Though originally a public health concern, HIV is now thought to be almost impossible for mosquitoes to transmit[citation needed].

Mosquitoes are estimated to transmit disease to more than 700 million people annually in Africa, South America, Central America, Mexico and much of Asia with millions of resulting deaths.

Methods used to prevent the spread of disease, or to protect individuals in areas where disease is endemic include Vector control aimed at mosquito eradication, disease prevention, using prophylactic drugs and developing vaccines and prevention of mosquito bites, with insecticides, nets and repellents. Since most such diseases are carried by “elderly” females, scientists have suggested focusing on these to avoid the evolution of resistance.

6. Control

Larvae in stagnant water / Mosquito killed by hand swatting
There are many methods used for mosquito control. Depending on the situation, source reduction, biocontrol, larviciding (control of larvae), or adulticiding (control of adults) may be used to manage mosquito populations.

These techniques are accomplished using habitat modification, such as removing stagnant water and other breeding areas, pesticide like DDT, natural predators, (eg Dragonflies, larvae-eating fish), and trapping. Garlic Oil concentrate will repel mosquitoes for up to 4 weeks.

7. Natural predators

Dragonflies are natural predators of mosquitoes. The dragonfly eats mosquitoes at all stages of development and is quite effective in controlling populations. Although bats and Purple Martins can be prodigious consumers of insects, many of which are pests, less than 1% of their diet typically consists of mosquitoes. Neither bats nor Purple Martins are known to control or even significantly reduce mosquito populations. Some cyclopoid copepods are predators on 1st instar larvae, killing up to 40 Aedes larvae per day. Larval Toxorhynchites mosquitoes are known as natural predators of other Culicidae. Each larva can eat an average of 10 to 20 mosquito larvae per day. During its entire development, a Toxorhynchites larva can consume an equivalent of 5,000 larvae of the first instar (L1) or 300 fourth instar larvae (L4) (Steffan & Evenhuis, 1981; Focks, 1982). However, Toxorhynchites can consume all types of prey, organic debris (Steffan & Evenhuis, 1981), or even exhibit cannibalistic behavior. A number of fish are also known to consume mosquito larvae, including bass, bluegill, catfish, fathead minnows, the western mosquitofish (Gambusia affinis), goldfish, guppies, and killifish.

Also, Bacillus thuringiensis israelensis has been used to control them as a biological agent. [citation needed]

8. Treatment of mosquito bites

Visible, irritating bites are due to an immune response from the binding of IgG and IgE antibodies to antigens in the mosquito’s saliva. Some of the sensitizing antigens are common to all mosquito species, whereas others are specific to certain species. There are both immediate hypersensitivity reactions (Types I & III) and delayed hypersensitivity reactions (Type IV) to mosquito bites (see Clements, 2000).

There are several commercially available anti-itch medications, including orally, such as Benadryl, or topically applied antihistamines and, for more severe cases, corticosteroids such as hydrocortisone and triamcinolone. Many home remedies exist, including calamine lotion. Ammonia has been clinically demonstrated to be an effective treatment. Both using a brush to scratch the area surrounding the bite and running scalding hot water (around 49 °C) over it can alleviate itching for several hours by reducing histamine-induced skin blood flow. On the other hand, excessive scratching can irritate the bite and break the skin, leading to prolonged recovery and the possibility of infection or scarring. [citation needed]

9. Cultural views

According to the “Mosquitoes” chapter in Kwaidan: Stories and Studies of Strange Things, by Lafcadio Hearn (1850–1904), mosquitoes are seen as reincarnations of the dead, condemned by the errors of their former lives to the condition of Jiki-ketsu-gaki, or “blood-drinking pretas”.

10. Evolution

The Culicinae and Anopheles clades are believed to have diverged about 150 million years ago. The Old and New World Anopheles species are believed to have subsequently diverged about 95 million years ago.

11. Systematics

There are approximately 3,500 species of mosquitoes grouped into 41 genera. Human malaria is transmitted only by females of the genus Anopheles. Of the approximately 430 Anopheles species, while over 100 are known to be able to transmit malaria to humans only 30-40 commonly do so in nature. Since breeding and biting habit differ considerably between species, species identification is important for control programmes.

12. References


27. Biting midges, no-see-ums
scientific name: Culicoides spp. (Insecta: Diptera: Ceratopogonidae)

Introduction - Distribution - Description - Life Cycle - Medical Significance - Management and Prevention - Selected References

Introduction

Biting midges can be a nuisance to campers, fishermen, hunters, hikers, gardeners, and others who spend time outdoors during early morning and evenings, and even during the daytime on still, cloudy days. They will readily bite humans; the bites are irritating, painful, and can cause long-lasting painful lesions for some people.

A common observation upon experiencing a bite from this insect is that something is biting, but the person suffering can not see what it is. Biting midges are sometimes incorrectly referred to as sand flies. Sand flies are insects that belong to a different biological group and should not be confused with the biting midges.

Distribution

There are over 4,000 species of biting midges in the Ceratopogonidae family, and over 1,000 in just one genus, Culicoides. The distribution of midges in the genus Culicoides is world-wide; 47 species are known to occur in Florida. Species belonging to the genus Leptoconops occur in the tropics, sub-tropics, the Caribbean, and some coastal areas of southeast Florida.

Breeding areas can be very varied depending on the particular species. Areas with substantial salt marsh habitat are major producers of many biting midge species. Additional sources for some species, like the bluetongue virus vector Culicoides sonorensis Wirth and Jones, include highly organic soil that is wet but not underwater such as those found with high manure loads in swine, sheep and cattle farming operations.

Description

Immature Stages: The eggs can be cigar, banana, or sausage shaped and approximately 0.25 mm long. They are white when first laid but later turn brown or black. The eggs are laid on moist soil and cannot withstand drying out. Some species can lay up to 450 eggs per batch and as many as seven batches in a lifespan. Eggs typically hatch within two to 10 days of being laid; time to hatch is dependent on the species and temperatures.

The larvae are worm-like, creamy white, and approximately 2 to 5 mm long. Larvae develop through four instars; the first instar larvae possess a functional spine-bearing proleg. Pupal color can be pale yellow to light brown to dark brown. They are 2 to 5 mm in length with an unsegmented cephalothorax that has a pair of respiratory horns that may bear spines or wrinkles. During this stage, the insects possess a spiny integument which can be used to identify the fly to species level.

Adults: The adult no-see-ums are gray and less than 1/8 inch long. The two wings possess dense hairs and give rise to pigmentation patterns. These wing patterns are used by biologists to identify species. The large compound eyes are more or less contiguous above the bases of the 15-segmented antennae. The pedicel of the males’ antennae houses the Johnston’s organ. The mouthparts are well-developed with cutting teeth on elongated mandibles in the proboscis, adapted for blood-sucking in females, but not in males. The thorax extends slightly over the head, and the abdomen is nine-segmented and tapered at the end.

Life Cycle

Adults: Biting midges are holometabolous, progressing from egg to larva to pupa, and finally to the adult stage. The complete cycle can occur in two to six weeks, but is dependent on the species and environmental conditions. The adults are most abundant near productive breeding sites, but will disperse to mate and to feed. The mean distance for female flight is 2 km, less than half of that distance for males.

Male Culicoides typically emerge before the females and are ready to mate when the female
emerges from the pupal stage. Mating typically occurs in flight when females fly into swarms of males and the insects are oriented end to end with the ventral parts of the genitalia in contact. Some species mate without swarming; instead, the males go to hosts where the female is likely to feed on blood; mating occurs when she finishes feeding.

**Eggs**: Males and females feed on nectar, but the females require blood for their eggs to mature. The females will blood-feed primarily around dawn and dusk; however, there are some species that prefer to feed during the day. Some species are autogenous and therefore may produce the first batch of viable eggs without a blood meal using reserves stored from the larval period; blood meals are required for subsequent batches of eggs.

The number of eggs produced varies among species and size of bloodmeal. For example, Culicoides furens (Poey) can lay 50 to 110 eggs per bloodmeal, and C. mississippiensis Hoffman, 25 to 50 eggs per bloodmeal. The adults can live two to seven weeks in a laboratory setting, but only a few weeks under natural conditions.

**Larvae**: Larvae require water, air and food and are not strictly aquatic or terrestrial. They cannot develop without moisture. The larvae are present in and around salt-marsh and mangrove swamps, shores of streams and ponds, in muddy substrates, and feed on small organisms. Most species cannot exist more than a few inches below the air-water interface.

In the tropics, the larval habitat of many species is in rotting fruit, bromeliads, and other water-holding plants. Other larval habitats include mud, sand, and debris at edges of ponds, lakes and springs, treeholes, and slime-covered bark. The larval stage can last from two weeks to a year, depending on the species, temperatures, and geographic area.

**Pupae**: The pupal stage typically lasts two to three days.

**Medical Significance**

In the U.S., the biting midges are primarily a nuisance and the major medical issue associated with Culicoides is allergic reactions to the bites. However, like other blood feeding Diptera, Culicoides species are vectors of pathogens that can cause disease in humans and animals. In Central and South America, western and central Africa, and some Caribbean islands, biting midges are the vectors of filarial worms in the genus Mansonella. These parasites cause infection in humans that produces dermatitis and skin lesions because the adult worms are located in the skin.

Biting midges, primarily the species Culicoides sonorensis, are responsible for transmission of bluetongue virus to sheep and cattle in the U.S. Bluetongue is a serious disease of ruminants. Bluetongue viruses are found world-wide and are transmitted by different Culicoides species in different regions. Many countries that are bluetongue free prohibit the movement of livestock from bluetongue endemic regions. The annual economic damage in lost trade is in the millions of dollars.

Other animal disease causing pathogens transmitted by the bite of infected biting midges include African Horsesickness virus in equines that is confined primarily to Africa and Epizootic Hemorrhagic Disease virus in ruminants found in North America and principally having lethal effects on deer. Some equines experience allergic reactions to the bites, resulting in equine allergic dermatitis, affecting the withers, mane, tail and ears of the animal.
Management and Prevention

Historically, management methods included diking and drainage of marshlands to reduce the habitats used by the immature stages. The insecticide DDT was used to target the adult stage. Currently, larval habitats are not targeted in control efforts because of the extensive amount of area that the habitats may cover, some negative environmental impacts resulting from changing water flow patterns of large areas, and the spotty spatial distribution of larvae within a given habitat.

Applications of insecticides targeting the adult stage are not efficient. While this type of application may kill biting midges active on a given night, they are continually dispersing from the larval habitat and entering areas of human activity. It would require insecticide applications on a daily basis in some areas, and this is not efficient or environmentally sound. Many government agencies that provide mosquito control services receive complaint calls about biting midges. However, most of the programs are not mandated or allowed to respond by providing control measures.

On a large scale, removal trapping is conducted using CO2 as an attractant to lure the biting midges to an insecticide-treated target where they are killed. Research from the IFAS Florida Medical Entomology Laboratory showed that biting midge populations were reduced in test areas of Vero Beach and Boynton Beach, FL, and Castaway Cay, Bahamas. This method of control is more appropriate for islands and specific inland areas where pest control personnel can make a long-term commitment to this technique.

Homeowners can install proper screening for windows and patios to prevent no-see-ums from entering residences and outdoor areas used for leisure and entertaining. Most biting midges can pass through 16-mesh insect wire screen and netting, so a smaller mesh size is required. The small mesh size does limit air flow through the screens, and an alternative is to treat screens with a long-lasting insecticide that will be fatal to the no-see-ums that land on the screen. Additionally, because no-see-ums are so small and are weak fliers, ceiling and window fans can be used at high speeds to keep no-see-ums out of small areas.

Repellents containing DEET (N,N-diethyl-meta-toluamide) typically used as mosquito repellents are also labeled for use against no-see-ums and can be applied prior to exposure to the biting midges. It is important that the directions for application that are printed on the label are followed for any product used as a repellent.

Coastal areas provide primary habitat for biting midges. Tourists and potential home and land owners can consult local maps prior to visiting or purchasing property in coastal areas, to determine the proximity to biting midge producing areas. It is prudent to research the area of geographic interest prior to making decisions that can lead to an unpleasant vacation or unhappy homeowners. Knowing the breeding habitats, and that large scale control operations are not feasible, one can be prepared with repellents or make decisions to build, or visit, elsewhere.

Selected References


28. Ticks

Ticks are the leading carriers (vectors) of diseases to humans in the United States, second only to mosquitoes worldwide. It is not the tick bite but the toxins, secretions, or organisms in the tick's saliva transmitted through the bite that causes disease.

Ticks are arthropods, like spiders. There are more than 800 species of ticks throughout the world. Two families of ticks, ixodidae (hard ticks) and argasidae (soft ticks), are important to humans because of the diseases or illnesses they can transmit or cause. Hard ticks have a tough back plate or scutum that defines their appearance. The hard ticks tend to attach and feed for hours to days. Soft ticks have more rounded bodies and do not have the hard scutum found in hard ticks. These ticks usually feed for less than one hour. Disease transmission from these ticks can occur in less than a minute. The bite of some of these ticks produces intensely painful reactions. Ticks can transmit disease to many hosts; some cause economic harm such as Texas fever (bovine babesiosis) in cattle that can kill up to 90% of yearling cows.

The following is a list of tick-borne diseases, the usual tick vector(s), and the pathogen(s) the tick transmits:

- **Lyme disease** -- ixodes species including deer ticks (hard ticks) -- vectors for Borrelia species of bacteria
- **Babesiosis** -- ixodes species (hard ticks) -- vectors for Babesia, a protozoan
- **Ehrlichiosis** -- Amblyomma americanum or lone star ticks (hard ticks) -- vectors for Ehrlichia chaffeensis and Ehrlichia ewingii bacterial species
- **Rocky Mountain spotted fever** -- Dermacentor variabilis (American dog tick) and Rocky Mountain wood tick (Dermacentor andersoni) (hard tick) are the primary vectors and occasionally the brown dog tick (Rhipicephalus sanguineus); Amblyomma cajennense (hard tick) is the vector in countries south of the United States -- vectors for Rickettsia bacteria
- **Rocky Mountain spotted fever** -- Dermacentor variabilis (American dog tick) and Rocky Mountain wood tick (Dermacentor andersoni) (hard tick) are the primary vectors and occasionally the brown dog tick (Rhipicephalus sanguineus); Amblyomma cajennense (hard tick) is the vector in countries south of the United States -- vectors for Rickettsia bacteria
• **Southern tick-associated rash illness (STARI)** -- Amblyomma americanum or lone star tick (hard tick) -- infectious agent not yet identified according to U.S. Centers for Disease Control and Prevention (CDC)

• **Tick-borne relapsing fever** -- Ornithodoros moubata or African tick (soft tick) -- vectors for *Borrelia* species of bacteria

• **Tularemia** -- *Dermacentor variabilis* (American dog tick) (hard tick) and *Amblyomma americanum* or lone star tick (hard tick) -- vectors for *Francisella tularensis* bacteria

• **Anaplasmosis** (human granulocytic anaplasmosis or HGA) -- *Ixodes* species (hard tick) -- vectors for *Anaplasma phagocytophilum* bacteria

• **Colorado tick fever** -- *Dermacentor andersoni* (hard tick) -- vectors for *Coltivirus*, a RNA virus

• **Powassan encephalitis** -- *Ixodes* species and *Dermacentor andersoni* (both hard ticks) -- vectors for *Powassan encephalitis* virus, an RNA arbovirus

• **Q fever** -- *Rhipicephalus sanguineus*, *Dermacentor andersoni*, and *Amblyomma americanum* (all three are hard ticks) -- vectors for *Coxiella burnetii*, a bacterium

Outbreaks of tick-related illnesses follow seasonal patterns (about April to September in the U.S.) as ticks evolve from larvae to adults. Ticks go through life cycles that involve mating and larval formation and usually have several hosts; the last Web citation shows the complicated life cycles of ticks. Ticks hide in low brush; this location allows them to physically contact a host. A recent study suggested that leaning against a tree or sitting on an old log was the quickest way to acquire ticks (about 30 seconds) in tick-infested areas. Ticks require a “blood meal” to grow and survive, and they are not very particular upon whom or what they feed. If ticks don’t find a host, they may die.

• Once a tick finds a host (such as a human, a pet dog or cat, a deer, or a rabbit) and finds a suitable site for attachment, the tick begins to burrow with its mouthparts into exposed skin. Tick mouthparts are barbed, which helps to secure them to the host.

• Often the tick secretes “cementum” to more firmly attach its mouthparts and head to the host. Ticks may secrete or regurgitate small amounts of saliva that contain neurotoxins. These nerve poisons cleverly prevent the host from feeling the pain and irritation of the bite. Consequently, individuals may never notice the tick bite or its feeding. The saliva may contain a blood thinner to make it easier for the tick to get its blood meal. Some people are allergic to these secretions and may have a quick and severe allergic reaction to a tick bite.

The approximate sizes of microbes can be approximated by using the following rule of thumb:

• **Viruses** are the smallest of all infectious agents, averaging about 100 nanometers (100 billionths of a meter) in length. They have so few genes and proteins of their own that in order to reproduce they need to commandeer the machinery of the cells they invade.

• **Bacteria** vary widely in size and shape, but tend to be at least 10 times larger than viruses, or at least 1 micrometer (1 millionth of a meter) long. They are single-cell organisms that reproduce independently.

• **Single-cell organisms** tend to be at least 10 times larger than bacteria, or about .01 millimeter long.

• **Multi cellular organisms** are so large they can usually be seen with the naked eye. Tapeworms, for instance, can reach a length of 6 meters (20 feet).
Food and water are the most common sources of parasite and invading organism transmission. Since most of us eat three times a day and drink water frequently throughout the day, our exposure to these sources is constant. Tap water has been found to be contaminated with harmful organisms. Both plant and animal foods carry parasites, and cleaning and cooking methods often do not often destroy them before ingestion. The CDC (Center for Disease Control) cites food as the catalyst behind 80 percent of the pathogenic outbreaks in the U.S. Most are linked to restaurants and delis where less than sanitary conditions exist -- from food preparation and storage to the utensils and servers’ hands.

Animals, just like humans, can become infected with parasites and unhealthy organisms. Internally, contaminated water and food can spread the problem to our pets. Externally, animals become infected by organisms on their bodies, especially on their fur, because of exposure to infected animal wastes. Forgetting to wash your hands even one time after handling or cleaning up after your animal can transmit the parasite to you. Pets are a wonderful part of our lives. They provide comfort, companionship, protection, amusement, and unconditional love for their owners. Yet, pets, like humans, are often victims of serious infections that can unintentionally be passed on to their owners. In fact, there is a whole set of diseases classified as ‘zoonoses’ (animal-transmitted diseases) in parasitology textbooks. Animals are major carriers of harmful organisms, and most physicians, let alone the general public, are seemingly unaware of this fact. Experts have projected that of the 110 million pet dogs and cats in this country, over half may be infected with at least one or more different kinds of harmful organisms. Considering these numbers, the potential for transmission of parasitically invading organism infection from animals to humans is extremely high. Making a parasite cleanse an essential part of an effective health maintenance program for both people and animals alike.

The CDC estimates that the number of parasites present in the United States alone number in the thousands. These harmful organisms are biochemically complex creatures in their life histories, development, reproductive cycles, nutritional requirements, and manifestation. They are categorized according to structure, shape, function, and reproductive ability. These include microscopic organisms (protozoa); roundworms, pinworms, whipworms, and hookworms (nematode); tapeworms (cestoda); and flukes (trematoda).

**PROTOZOA**

Making up approximately 70 percent of all invading organisms, protozoa are invisible to the naked eye. They are one-celled microscopic organisms, but don’t let their size fool you. Certain protozoa, 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 cysts - 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. According to experts, an estimated 7 million people across the U.S. have some form of protozoa living inside of them. Common protozoa include: Endolimax nana, Giardia lamblia, Entamoeba histolytica, Cryptosporidium parvum, Blastocystis hominis, Trichomonas vaginalis, Toxoplasma gondii, Cyclospora cayetanensis, Cryptosporidium muris, Pneumocystis carinii, Plasmodium malariae, Plasmodium ovale, Plasmodium vivax, Plasmodium falciparum, Leishmania donovani, Leishmania tropica, and Leishmania braziliensis.

**NEMATODE**

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 percent of the world’s population’. This is a frightening statement.

Common nematode include: Roundworm (Ascaris lumbricoides), Hookworm (Necator americanus, Ancylostoma duodenale), Pinworm (Enterobius vermicularis), Roundworm (Toxocara canis, Toxocara cati), Heart worm (Dirofilaria immitis), Strongyloides (Strongyloides stercoralis), Trichinella (Trichinella spiralis), Filaria (Wuchereria bancrofti, Brugia malayi, Onchocerca volvulus, Loa loa, Mansonella streptocerca, Mansonella perstans, Mansonella ozzardi), and Anisakine larvae.

**CESTODA**

Among the oldest known parasites, tapeworms are considered humanity’s largest intestinal inhabitant. They each have a scolex (head) that attaches to the intestinal wall. As long as the head remains attached to the intestinal mucosa, 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 ribbon-like, with a covering that is a transparent skin-like layer. Common cestoda include: Beef tapeworm (Taenia saginata), Pork tapeworm (Taenia solium), Fish tapeworm (Diphyllobothrium latum), and Dog tapeworm (Dipylidium caninum).
Trematode are leaf-shaped flatworms also known as flukes. They are parasitic during nearly all of their lifecycle forms. The 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.

Common trematode include: Intestinal fluke (Fasciolopsis buski), Blood fluke (Schistosoma japonicum, Schistosoma mansoni) Schistosoma haematobium), Liver fluke (Clonorchis sinensis), Oriental lung fluke (Paragonimus westermani), and Sheep liver fluke (Fasciola hepatica).

The following pictorial gallery shows what a few of the commonly known invading organisms look like, that may also call the human body home...
- Roundworm
- Pinworm
- Hookworm
- Whipworm
- Dwarf Tape worm
- Fish Tapeworm
- Intestinal Fluke
- Amoeba Organisms
This little review of some of the creatures that can infect our bodies, I hope has been insightful. I hope you are concerned but don’t be over concerned. This is natural. We should live in harmony and symbiosis with God’s creatures. The problem comes when our immune system cannot control the harmony and the symbiosis leads to opportunistic invasion of an intruder. Then a symbiotic friend turns to a greedy invader.

All of these creatures have unique trivector field signatures. The fields are magnetic in some of their components. We have found that a trivector magnetic field on the body can boost the natural immune field and help to repulse and increase the natural defense. This technology is the SHOOO technique, developed by Desire’ Dubounet. Read the scientific article on this to learn more.

We hope that this little tour of the possible internal landscape of invaders is helpful to you and increases your appreciation for care and health. Good prevention, once a year natural de-worming, and good nutrition are all helpful at keeping harmony with the world around us and the world in and on us.
Therapy

As I travel the world lecturing to doctors and shooting movies, I always stop at a local pharmacy to see what type of worm or parasite medicines they use in their locale. This is interesting and before I bring back something which has no solution in my homeland I should be prepared as my scoutmaster once said to help me and my family. Everywhere there are worms. There are more worms than any other living thing on this planet by volume. This truly is the planet of the worms and we are just symbiotic creatures trying to live in harmony with them. But we all need to once a year de-worm and not allow them to over proliferate.

Most worm infestations start with simple barefoot on ground with worms or flukes. Even with no breaks in the skin they can intrude. Contact with animals and where animals defecate in a problem. Be careful wash and have fun.

I have found formulas with cloves, goldenrod and goldenseal root, Silver, Aloe-Aloe, Gold-Copper, black walnut, Wormwood, Chinese Honeysuckle, Pumpkin seeds, anise seeds, cayenne, curry, paprika. People tend to eat more spicy foods in areas with more worms for a reason, Health. Many of these are simple foods that can be used more in the diet, but some of the herbs are strong and should be used once a year and with caution. To kill the eggs a one month use of light herbs can flush out the worms and effectively de-worm your client or child.

I try to get the family to eat spicy things. Slowly at first, then more and more. Spicy foods scare away the start of an infestation, but it will not discourage a full bore infestation. We minimize barefoot on dirt, eat at good restaurants, never at street stands where the seller often has no time to wash his hands, never eat fast foods, we eat good foods not shit foods, and we use good caution when dealing with foreign animals. Since my children love animals after contact we need to be ready with a safe natural local parasite program.

Humans are made to eat good nutrition, worms are made to eat shit from the ground. When you eat shit poor foods it does not feed you but the worms thrive on it. Avoid bad sugars and bad oils. Eat for you not the worm.

Here are some herbs for you or your pet.

Green Pharmacy for Worms

Mainstream medicine uses a variety of drugs to treat worms. They are generally effective, although some may cause severe side effects, including nausea, diarrhea, cramps and vertigo. If you suspect intestinal parasites, it’s a good idea to get a diagnosis from a physician and follow his or her advice concerning treatment. Then discuss these herbal remedies with your doctor. If you try a natural approach, you might be able to deal with the problem without the side effects caused by many pharmaceuticals.

Ginger: Common Spice and Wonder Drug, states that the tangy root is remarkably effective against some of the world’s most dangerous parasites.

Among these is the anisakis worm, a Japanese worm that is carried in raw fish and is now increasingly common in the United States. No wonder the Japanese eat pickled ginger extract immobilized more than 90 percent of anisakis larvae within 4 hrs and destroyed them in 16 hrs.
If you’re a big fan of sashimi, the Japanese raw-fish specialty, it probably wouldn’t be a bad idea to adopt the Japanese custom of having some pickled ginger available in Asian markets and many specialty food stores.

The same advice goes for eating ceviche, the Latin American dish made from marinated raw fish: Top off your meal with a piece of pickled ginger for a double whammy.

**Wormseed (Chenopodium ambrosioides).** Wormseed is not used as a dewormer only in the tropics. As a long-time resident of Maryland, I am proud to relate that wormseed was once produced commercially in my state’s Carroll and Frederick counties for treatment of intestinal worms in American children and pets. I’ve also found that wormseed helps relieve gas, so I add it to bean soups. For worms, I’d try a concentrated tea. A word of caution: The concentrated wormseed oil is too potent to use.

You’re far more likely to find this herb sold under the Spanish name epazote. Although wormseed is the correct English name, natural food stores tend to shy away from selling it under this name.

**Garlic** to treat pinworms, roundworms, giardia (an amoeba) and other parasitic infections. He suggests juicing three cloves with four to six ounces of carrot juice and taking it every two hours.

**Papaya** (Carica papaya). Here’s another Panama-Peru connection: The Choco Indians that I studied more than three decades ago used to take the protein-digesting (proteolytic) latex of papaya to get rid of intestinal parasites. My new Peruvian Indian friends have gotten a mite more efficient and tidy: They swallow about a dozen of the pellet-size papaya seeds to accomplish the same end. I have chewed papaya seeds, and they are almost as hot as vitamin C, which helps build immunity, and hot-flavored seeds that help repel intestinal worms.

**Pineapple** (Ananas comosus). Tapeworms may clear up after three days of eating nothing but pineapple. Pineapple contains the protein-digesting enzyme Turmeric (Curcuma longa). Indian folk healers recommend this tasty spice for getting rid of worms, particularly nematodes. turmeric, as far as I’m concerned, is to enjoy curry dishes, in which it is a key ingredient. It is responsible for curries’ yellow color.

**Clove tea or adding powdered cloves to pineapple or papaya juices.**

Finally, because proteolytic enzymes. These include breadfruit, figs, papaya and pineapple. Spice the beverage to taste with cloves, turmeric. (Unless you live in the tropics, you probably won’t be able to get the breadfruit. It’s okay to leave it out.) You might also add a little prune juice as a laxative to help expel dislodged worms.

**Black Walnut**

Black walnut is often used by pet owners as a natural de-worming agent, especially to treat heartworm disease. While the history of the herb supports its use to treat parasites, there is no consistent proof of its use as a single agent to treat heartworm infection. This herb is usually considered too toxic to use without supervision. The tannins and alkaloids may lead to vomiting and diarrhea. Most conventional de-wormers (and other herbal de-worming preparations) are much safer.

**German Chamomile**

Chamomile is well known for its sedative effects. Avoid in pregnant animals as it may cause abortion. Usually considered a safe herb, the rare pet or child may be allergic to chamomile.

**Chaparral**

Chaparral is reported to be an effective antimicrobial herb. However, ingestion of large amounts can lead to liver damage; avoid with liver disease; potentially a very toxic herb and not usually recommended.

**Red Clover**

Red clover is used in many herbal cancer formulas due to its diuretic, blood cleansing, and anti-neoplastic effects. Red clover contains coumadin and should not be used in pets with blood clotting disorders. If fed in large amounts, the estrogenic components can be toxic. Do not use in pregnant animals. Red clover contains very small amounts of salicylic acid (aspirin,) and care should be used in taking corticosteroids or non-steroidal medications and in cats or children which are sensitive to salicylic acid.

**Comfrey**

Comfrey has been used for its anti-inflammatory and lubricating properties. Comfrey contains alkaloids that can cause liver damage or cancer. While the leaves (the most commonly used part of the herb) contain almost negligible amounts of alkaloids (the roots contain the most and should never be used,) many doctors consider it too toxic to use for any reason.

**Echinacea**

Echinacea is a well-known immune modulating supplement. For immune system disorders (autoimmune diseases, diabetes) and disorders with diminished immune systems with low white blood cell counts (feline leukemia and immunodeficiency diseases,) it was recommended in the older literature to avoid this herb as Echinacea is used for immune stimulation. However, there have been no clinical studies supporting this recommendation, and Echinacea has been safely used in people with these disorders.

The older literature also recommended not using the herb for longer than 4-8 weeks without giving the body a “break,” but again this has not been substantiated clinically and it has in fact been used for longer periods of time without harm. Most veterinarians prefer to use Echinacea early in the course of the disease at the first signs of infection to properly and fully modulate the immune system. Caution is warranted in diabetics as the condition may become unstable.

**Ephedra**

Ephedra has a long history of use in Traditional Chinese Medicine as an effective therapy for respiratory (especially asthmatic) disorders. While it has been reported that cats may exhibit...
idiosyncratic reactions, I have not had any side effects in cats treated with ephedra for upper respiratory disease. Ephedra, most commonly prescribed for pets with asthma or respiratory problems, can cause heart arrhythmias and high blood pressure. Use with great caution in all pets.

It should not be used when medications which have similar actions are used (MAO inhibitors, sympathomimetics) or in pets with hypertension, cardiac arrhythmias, anxiety, restlessness, glaucoma, cardiovascular disease, impaired cerebral circulation, prostatic adenoma, pheochromocytoma, or hyperthyroidism.

Garlic

Garlic has been historically recommended for many uses, including the treatment of parasites, microbial infections, and in the treatment of cancer. Garlic in large amounts can cause Heinz body anemia in dogs and cats due to the presence of S-methyl cysteine sulfoxide and N-propyldisulfide. Do not use in pets with anemia. Garlic in high doses can prolong bleeding times. As a general guideline, 1 clove of garlic per 10 pounds of body weight for dogs (and 1/2 clove per cat) can usually be fed safely each day if the pet is not anemic.

Ginkgo Biloba

Ginkgo is well known for its use in treating mild forms of cognitive disorder and intermittent caudication in people. Ginkgo has antithrombotic activity via its PAF inhibition. Caution should be used if ginkgo is given to patients taking anticoagulant or antithrombotic medications (aspirin, NSAIDS.)

It has been suggested that anti-platelet medications and herbs be stopped about 1 week prior to surgery. Rare reports of spontaneous bleeding (subdural hematomas, hyphema, subarachnoid hemorrhage) are reported in the human literature, especially when combined with high doses of fish oil or other anti-clotting medications. No reports are noted in pets. Do not use in animals with blood clotting disorders. Do not use in pregnant animals.

Kava kava

Kava has a long traditional history of being a good calming, sedative herb. Can be toxic to the liver in excess amounts and it should not be used in pets with liver disease. There have been recent reports of liver toxicity and death in depressed people treated with this herb. However, careful analysis of these reports revealed that these patients had preexisting liver disease, were taking drugs with potential hepatotoxicity, or where suffering from chronic alcoholism.

The herb has a long history of safety but it is recommended to screen for liver disease before using the herb and to periodically monitor liver enzymes if the herb needs to be given for long-term use.

Do not use in pregnant animals. May interact with anxiolytic medications (Valium, etc.)

Milk Thistle

Milk thistle is well-known for its treatment of liver disease. Do not use in pregnant animals. Long term use in normal animals may result in depressed liver function unless chronic liver disease is present. It is not recommended to use milk thistle to prevent liver disease.

Passionflower

This herb is used for its sedative effects. Do not use in pregnant animals. Excessive doses may cause sedation and potentiate the effects of drugs that are monoamine oxidase (MAO) medications.

Pennroyal

While pennroyal oil is an effective insecticide, due to potential severe toxicity and death pennroyal oil is not recommended for use in pets.

Tea Tree

Tea tree oil is used topically for its antimicrobial effects. It can also help itching and control external parasites like fleas. It is generally recommended not to use most volatile oils in cats, or only do so with proper dilution and supervision. Small-breed dogs may also be sensitive to undiluted oil. The safest way to use this product is to only purchase properly prepared and already diluted products.

Valerian

This herb is used for its sedative effects. Do not use it in pregnant animals. It can cause gastrointestinal upset in large doses. Do not use with similar medications (barbiturates or benzodiazepenes like Valium) without medical supervision as increased sedation may occur.

Wormwood

Like black walnut, this is another traditional de-worming herb. It is considered unsafe for internal use in people without careful supervision. Do not use in pets with seizures, kidney disease, liver disease, or in pregnant animals. Safer herbs for de-worming exist and wormwood should only be used once a year and then with extreme caution.

St. John’s Wort

This is used as a natural sedative. Some pets may develop sensitivity to sun exposure, although this is unlikely in dogs and cats when used at recommended dosages. It may interact with other similar medications. Serotonin syndrome may occur if combined with SSRI medications. St. John’s Wort may interfere with the metabolism of medications administered with St. John’s Wort."

Fatty Acids

Both flax seed and fish oil are considered very safe when used at commonly recommended doses. High doses of fish oil have caused brain hemorrhages in some people when combined with other supplements or medications that interfere with blood clotting.

Joint Supplements

Hyaluronic acid, glucosamine, and chondroitin are safe when used at recommended doses. They are very effective in controlling joint pain and are much safer than commonly prescribed NSAID medications

Vitamins and Minerals

When given as combination animal (not people) products, most of these supplements should be...
safe. Individual vitamins, especially when used in high doses, act like drugs and can be dangerous and should only be used under veterinary supervision.

**Probiotics**

Probiotics are used to help pets with gastrointestinal problems and are safe when used as directed.

**Enzymes**

Enzymes are among the safest supplements, although one of my own patients has experienced seizures as an idiosyncratic reaction to one particular product.

**Green Foods**

These supplements, typical grasses like barley grass, wheat grass, algae, or spirulina are usually safe when used as directed. There are many many herbal remedies for parasite control. Here are some popular ones. Be careful and don’t believe everything you read.

**Niyog-niyogan**

Quisqualis indica

*Yesterday, today, and tomorrow*

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**Botany**

Large climbing shrub. Leaves are oblong and opposite, rounded at the base. Flowers tubular and fragrant, white to purplish orange, in clusters on the same stalk. Narrow 5-angled dried fruit, resembling coconuts in taste.

**Graphic/photo**

Fruits measuring 35-40 mm (upper and lower rows); seeds (middle row) shaped like the fruit-shell, measuring 12-15 mm.

**Distribution**

Grows widely in thickets. The seeds are easily propagated.

**Parts utilized**

Seeds (dried nuts) and leaves.

**Constituents**

Fatty oil, 15%; gum; resin.

Studies yield quisqualic acid, quisqualin A.

Considered anthelmintic, antiinflammatory.

**Uses**

**Folkloric**

- Anthelmintic: Dried seeds preferable for deworming.
- Adults: Dried nuts-chew 8 to 10 small- to medium-sized dried nuts two hours after a meal, as a single dose, followed by a half glass of water. If fresh nuts are used, chew only 4-5 nuts. Hiccups occur more frequently with the use of fresh nuts.
- Children 3-5 years old: 4-5 dried nuts; 6 - 8 years old: 5-6 dried nuts; 9-12 years old: 6-7 dried nuts.
Caution: Adverse reactions - diarrhea, abdominal pain, distention and hiccups more likely if nuts are eaten in consecutive days or when fresh nuts are eaten.

- Roasted seeds for diarrhea and fever.
- Pounded leaves externally for skin diseases.
- Decocction of boiled leaves used for dysuria.
- Ifugao migrants use it for headache.
- In Thailand, seeds used as anthelmintic; flowers for diarrhea.
- In Bangladesh, used for diarrhea, fever, boils, ulcers and helminthiasis.

Studies
- Kinetics of Acetylcholinesterase Inhibition of Quisqualis indica Linn. Flower Extract: Flower extract yielded high polyphenol contents and showed a strong antioxidant activity. The QI extract inhibited acetylcholinesterase activity. Acetylcholine is an important nervous system neurotransmitter.

Green Walnut - 826-100ml

GREEN WALNUT - Supplement for formula # 825 VermXpel, simply called 826 Green Walnut deworming booster. A triple-strength walnut formula which boosts the properties of formula #825 VermXpel in more chronic conditions.

Contains Green husk of black walnut, Aloe vera gel, carrageen sea herb, Paulownia leaf, Prickley ash berry, Cayenne pod, Vitamin E.

GENERAL ADVICE
- Shake well 5 - 6 times up-ended to remix.
- Initial Dosage: Day 1 - 1/4 dose, Day 2 - 1/2 dose, Day 3 - full dose, swill before swallowing.
- Coffee/Tea: May be taken 1/2 hour before or after dose.
- Preconception: (whilst attempting) 1/4 to 1/2 dosage.
- Pregnancy: 1/4 to 1/2 dose daily up to 10 weeks.
- Breastfeeding: 1/4 to 1/2 dose 2-3 x daily.
- Surgery: (all) 1/4 dosage, 2-3 x daily, recuperating. Stop tonic doses 1 week prior to surgery.
- Drugs: Check drug/herb compatibility information sources prior to purchase. Take tonic 1/2 hour before drugs. Reduce tonic dose to 1/2 if on drug medication.

This preparation is not a cure nor a substitute for orthodox medical attention and treatment. Do not exceed stated dosages. Refrigeration not required. Keep out of reach of Children.
Vitaklenz - Parasites & Worms Cleanse - Herbal Tablets

Vitaklenz - The Natural Herbal Formula for Parasites & Worms

Vitaklenz is a blend of herbs traditionally used to control parasites. The double action of this powerful formula assists the elimination of parasites and candida infestation. It is one of the most powerful parasite cleansing treatments in the UK and has become one of our bestselling products.

Parasite cleanse Vitaklenz contains only natural ingredients

Vitaklenz herbal tablets contain: Cloves; Wormwood; Black Walnut Green Hulls Pumpkin Seed; Milk Thistle; Olive Leaf; Pau d'Arco; Gentian; Echinacea; Barberry; Garlic; Thyme - all natural ingredients to rid your body of parasites and worms. A 30 day treatment of Vitaklenz recommended for Adults over 12 years: 3 tablets per day

Parasites & Worms

Parasites can rob your system of nutrition, loading it down with the parasite's excretions and secretions. You probably don't even know they are there. Parasites can pose a serious health threat. Parasitic worms may result in poor absorption of nutrients, and can contribute to fever, abdominal pain and anaemia. People with worm infections may feel bloated, tired, hungry, allergies, asthma, gas, digestive disorders, unclear thinking or feel toxic. Damage and symptoms will vary on the type of parasite infection. Some of the common ones are tapeworm, round worm, pin worm, hookworm, and the single cell parasites; amoebae, protozoa infections, nespora, Toxoplasmosis, cryptosporidium, giardia, Sarcocystis and Trichomonas vaginalis.

There can be over 100 different types of parasites worms living in human bodies. Some are microscopic in size while others can be seen quite easily. These common organisms can be found everywhere in our environment, in the air we breath, in the water we drink, or in the food we eat. Parasite is an organism that lives on or in other organisms from which it obtains nutrients to live and causes harm in the process. People with intestinal parasite infections are usually under-nourished and weak, infected with viral, fungal, or bacteria, and have various types of chemical and metal poisoning. Human intestinal parasites can be present in any person, at any age. They are responsible for many health problems because they secrete toxins and steal the vital nutrients from our bodies. They can exaggerate other health problems you may be experiencing. Everyone is at risk and under their mercy during parasitic infections. The processed foods, drugs, cigarettes, alcohol, low hygiene can all contribute to parasitic invasion. Most parasites require a host to complete their life cycle. Animals can also serve as a host. The parasite will vary in size from the smallest one-thousandth of a micron to whale tapeworms a hundred feet long.

Vitaklenz may help rid the body of parasitic and yeast infections common to man. Vitaklenz herbal tablets contain Cloves, Wormwood, Black Walnut Green Hulls Pumpkin Seed, Milk Thistle, Olive Leaf, Pau d'Arco, Gentian, Echinacea, Barberry, Garlic & Thyme.

Yearly Prevention of Worms + Other Parasites

1. Avoid exposure by not going barefoot, use light sandals, wash foods well, eat at reliable clean restaurants not street markets, but still exposure is likely
2. Spice is nice, these parasites hate strong spices, use on food not to excess. Ginger, mustard, cayenne, wormseed, wormwood, garlic, clove, black walnut, comfrey, green tea, tea tree oil.
3. SCIO anti-parasite therapy
4. Use teas of the herbs listed regularly
5. Papaya and pineapple have enzymes that can weaken and destroy parasites, use the fresh juice often
6. The skin's most fruits have anti-parasite effects, but the citrus have the most, grate up the skins of grapefruit, orange, lime, or their oil. Use as teas or to put into drinks or food.
7. Mexico and other countries have good OTC remedies used for one week once a year.
8. Once a year you and your family should do a parasite cleanse week, use teas 3x a day, juices 2x a day, extra ginger as a side dish.

Use the Desiré anti-parasite soup once a day for three days:

- chop up 3 onions, 3 tomatoes, 10 cloves of garlic; cloves; wormwood, black walnut, green hulls pumpkin seed; milk thistle; olive leaf; pau d'arco; gentian; echinacea; barberry; garlic, thyme, skins of citrus
- simmer at low temp for 3 hours
- lots of water, exercise, mediation, and enemas if there is no stool forthcoming

Once a year will do most of us nicely.
Top 5 Menu Items Most Likely to Contain Parasites

The parasitic life is all about finding niches in the ecosystem and exploiting them for all they’re worth. And after billions of years mucking their way through blood vessels and intestines, you better believe they’ve gotten rather good at it. Untold billions are clamoring for a chance to get inside you -- and it just so happens that the best way to do that is to stow away in your next meal.

In this article, we’re going to take a look at a few menu items with a high probability for parasites. By no means does this mean you’re guaranteed a belly full of worms with each one! It’s essential to stress that proper food storage, fresh ingredients and sanitary food preparation conditions vastly decrease the chances for food contamination.

So get ready to tuck in your napkin -- and for goodness sake wash your hands -- because we’re about to take a close look at what’s for dinner.

5. Escargot

If you happen to find the prospect of consuming cooked snails repulsive, then their parasites aren’t going to concern you. However, if you’re in the opposite camp and can’t think of a better conveyance for tasty garlic butter, then you might want to sit down before reading this. Did you know that snails themselves sometimes dine on decaying leaves, fecal matter and carrion? For this reason, one of the first steps in preparing a snail for the dinner table is to clean out its digestive system. Snail farmers often avoid a lot of potential toxicity by raising their livestock on ground cereal.
Think back to that diet -- not the ground cereal, the other stuff. Angiostrongylus cantonensis or rat lungworm frequently set up house in snails and other mollusks thanks to their indiscriminate palates. And since snails are both bottom feeders and tasty treats, they’re perfect for transmitting these parasites. Enjoy some undercooked escargot and Angiostrongylus cantonensis might wind up in your brain, resulting in sickness, headache and even meningitis. Additionally, a poorly washed food snail can bring a number of other disease risks straight to your table. To be fair, however, rat lungworm is common in a number of mollusks, including freshwater snails, slugs, shrimp and crabs. Frogs also play host. As always, the safest move is to err on the side of overcooking your creepy, crawly dinner choice.

4. Sushi and sashimi

The world’s oceans are teeming with delicious life forms. The problem is that many of those life forms are home to parasites. You can eliminate the risk of infection by simply cooking your seafood thoroughly. Alternately, you can freeze the fish for a week or cure it in saturated salt brine for five to seven days.

Sadly, each of these techniques can leave sushi enthusiasts in the lurch. The whole point to sushi, after all, is to appreciate the taste and texture of fresh, raw seafood. The two problem worms to consider before dining on uncooked fruit of the sea are the Anisakidae nematode roundworms and the Diphyllobothrium tapeworm.

Of these, the roundworm is the most common. If ingested, you might not even notice it or suffer any symptoms. However, the worm can “tickle” your throat on the way down, and if it bores into your stomach lining, it can cause severe abdominal inflammation and pain within an hour of ingestion. Luckily, these pesky parasites don’t survive longer than 10 days in the human digestive track.

The Diphyllobothrium tapeworm is common in salmon, as well as other saltwater fish that also frequent fresh water. These freeloaders can thrive in the human gut for years, causing abdominal pain, weakness, weight loss and anemia. Luckily, they can be eradicated through medical treatment.

To avoid risking a mouthful of spicy nematode roll or tapeworm sashimi, stick to reputable restaurants that follow food safety guidelines. If you’re still feeling a bit paranoid, ask whether the fish has been previously frozen or stick to the many sushi options that use cooked or vegetarian ingredients.

3. Steak tartare

What’s this, more raw meat? Do you see a pattern forming here? Naturally, steak or lamb tartare can offer an excellent risk for parasitic infection. Not only does the whole dish revolve around raw meat, but many recipes call for the addition of a raw egg as well. While a delectable treat in Asia, Eastern Europe and Ethiopia, all that raw meat serves up the risk for roundworms and the intracellular bacteria parasites salmonella, E. coli and Listeria monocytogenes.

The key here is to order tartare only from a reputable establishment. If you’re going to eat it raw, you’re going to want a very fresh, certified cut of meat and you’re going to want it prepared in a hygienic environment. Some chefs put an emphasis on the use of grass-fed livestock, as the bacteria in grain-fed animals become acclimatized to an acidic environment, preparing them for
survival in the human gut. Also, freezing a cut of beef for 14 days should wipe out any parasitic risks. Steak and lamb tartare dishes (as well as other raw meats) remain a delicacy throughout the world and there’s no reason to cease your enjoyment of them. Just exercise a little caution when choosing where you order it.

2. Pink hamburger

Granted, not all hamburgers are created equal. On one end of the spectrum, you have the discs of gray mystery meat grill-flipped by the hundreds at your local fast-food joint. On the other end, you have fancy gourmet burgers ground to order. Somewhere in between, summertime grill masters put the sizzle on some serious beef patties.

But if steak tartare is the classy method of consuming raw beef, then a rare, pink hamburger is generally considered the low-rent option for risking a bun full of E. coli, Listeria monocytogenes or salmonella. Undercooked hamburgers are a major risk factor for E. coli, with the number of outbreaks typically doubling during summer months.

Again, cleanliness and freshness are everything. While you might invite the prospect of a pink center in a $30 gourmet burger, you should send that pinkish fast-food burger back. In addition, a 2008 study published in the Annals of Diagnostic Pathology examined the contents of eight fast-food hamburgers and discovered Sarcocystis parasites in two of them. Unlike other parasites that might be lurking in a pink hamburger, Sarcocystis is usually asymptomatic.
Yellow toenails Symptoms

Health Tips Facts – Yellow toenails Symptoms Causes Home Natural Treatments Remedies Cure

What are Yellow toenails? / Yellow nails Definition:

Yellow toenails are usually a sign of trouble to come. Although harmless bacterial colonization can cause a color change in nails (usually green), and there is a rare condition called yellow nail syndrome, by far the most common cause of yellowish or brownish discoloration in the toenails is fungus infection. A zinc deficiency or liver disease can contribute to the problem but usually make the color whitish.

Yellow toenails Symptoms Signs:

Black discolored toenails, crumbling or split toenails, Flaky and thick nails, Pit marks on the nails, A collection of debris under the nail, which can cause a foul odor

Yellow toenails Causes Risk Factors:

Fungi inhabit dark, warm and moist types of environments including stockings, shoes and socks. These fungi are opportunists that infect an unprotective area of the toenail.

Person-to-person contact is a manner by which many people become infected with onychomycosis.
Activities such as jumping, running, playing tennis and banging our feet can cause a break in the nail or fracture, which allows the fungi a great opportunity to infect the area.

Yellow toenails Prevention Natural Home Treatments Remedies Cures

Tight fitting sweaty shoes further compound risks of getting toenail fungus. Public pool areas and showers are also a common place where you can get infected. Another more common method of getting toenail fungus is by cutting your toenails too short.

Fungus can be treated medically, but oral medications – prescribed by your doctor – can have bad side effects and can destroy your liver. These terrible toxic drugs can even become fatal.

Submerge the toe into strong store bought vinegar 15% acid or stronger for 20 minutes or as long as you can, at least 10 minutes is needed. The acetic acid will penetrate to the nerve and destroy the fungus at the root in the nerve. This will hurt like the dickens. The pain is the nerve getting cleansed by the acid. But when the fungus is killed at the root it will be clean, but could get re-infected from your shoes if you do not spray them with an anti-fungal spray.

Natural oils like tea tree oil, clove oil and lemongrass oils are effective because they can soften the nail and get under the toenail where the fungus lives. All of these have anti-fungal and anti-microbial properties to help kill the fungus and get rid of yellow toenails.

Hypoglycemia Symptoms Signs:
- Intense and unexplained headaches.
- Unsteady, dizzy and unbalanced feelings.
- Tremors without any known reason.
- Frequent hunger, especially soon after eating.
- Clumsiness due to the lack of muscle control.
- Forgetfulness and mental confusion.
- Increased nervousness and anxiety level also increases a lot.

Hypoglycemia Causes Risk Factors:
Missing meals, other medical conditions and other medications can all cause it. Certain types of cancer can cause low blood sugar. Some of those include mesothelioma and fibro sarcoma. These cancers can produce factors similar to insulin. Some congenital birth defects, failure of the kidneys or liver and adrenal insufficiency are other possible reason.

Hypoglycemia Home Herbal Natural Treatments Remedies Cure Prevention:
Oral medication or drugs taken intravenously may be required for persons who are feeling hypoglycemic. This could be a symptom of a more serious disease.

The following Vitamins can assist in the prevention of attacks from hypoglycemia, they are magnesium, vitamin B, C, and E, and zinc.

The technique used here mainly helps the individual by diminishing stress, which is another potential cause of hypoglycemia. Practitioners of reflexology, Oriental bodywork, massage, and Craniofacial Therapy can help regulate the relevant body systems.

When combined with small, light snacks several times a day, herbal teas made from burdock, dandelion, or licorice can help stabilize blood sugar levels.

Ginseng is a famous blood sugar regulator; daily dosages vary from 6 grams of the powdered herb to 10 grams taken in decoction form.

Reishi is another herb that is beneficial in maintaining the normal level of glucose or sugar in our blood stream.
What is Ringworm? / Ringworm Definition:

Ringworm is basically a form of a skin infection which is caused by a fungus that affects the skin, nails, scalp or foot. These infections also lead to redness and severe itchiness in the affected area. Not only humans get it, even pet animals such as dogs and cats are often prone to it.

Ringworm Symptoms Signs:

The symptoms of ringworm include baldness in the scalp, thicker and brittle nails, ring shaped red areas in the body. In the foot, ringworm manifests itself as scaling or cracking of the skin between the toes. Doctors detect ringworm using a variety of techniques such as Wood's light, fungal culture, microscopic examination and even biopsy.

Ringworm Causes Risk Factors:

Most common causes of ringworm among humans is through direct contact with other humans—sharing combs or clothing or by touching the infected area. It is also transmitted through infected pets or other animals. Children, especially, due to their proximity with pets, are prone to the disease. Wearing caps or socks for long periods give the fungi an opportunity to spread, which is why ringworms usually occur in feet, toes, thighs and scalp.

Ringworm Prevention Home Herbal Natural Treatments Cures Remedies:

Take precautions such as keeping skin clean and dry since fungi thrive quickly in unclean and moist conditions. The homoeopathic medicines are organic in nature and pesticide free. They are becoming quite popular due to the fact that they do not lead to any sort of side effects. You can use some over the counter ringworm curing creams. Most of the anti fungal creams should work, but Lamisil anti fungal cream is the most popular and it should cure your ringworm fast. I recommend using Lamisil and a miconazole anti-fungal product each use a slightly different anti-fungal which helps kill a more wide spectrum of fungus. Use garlic oil and tea tree oil in between the two topical anti-fungals.

Another effective antifungal agent for external use is Selsun Blue (a pharmaceutical shampoo), product that is most effective in combination with Lamisil gel or miconazole.
Quinine

1. Quinine has been used as an effective relief for leg cramps for many years. However, the U.S. Food and Drug Administration does not approve its use for that purpose. Quinine is approved by the FDA only for the treatment of malaria.

For many years, over the counter pills such as Legatrin, containing quinine sulfate, were marketed for relief of leg cramps. In 1994 the FDA ordered these pills removed from drug store and supermarket shelves because quinine was not approved for such treatment. Despite the ban, doctors continued to prescribe quinine for leg cramps until 2006 when the FDA cracked down, approving one brand of quinine only for treatment of malaria.

A homeopathic remedy called Leg Cramps with Quinine, produced by Hyland’s, is now available without a prescription in drug stores and in some health product catalogs and health food stores. The pills contain quinine (cinchona officinalis) and are regulated by the Homeopathic Pharmacopoeia of the United States.

Homeopathic remedies are small, diluted quantities of substances that are used to stimulate the body’s own healing process.
A quick remedy for nighttime leg and foot cramps is a glass of tonic water, also called quinine water. It is the beverage used in gin and tonic or vodka and tonic drinks and is available in any supermarket. Anyone who is subject to frequent leg cramps might wish to keep a bottle in the refrigerator. Tonic water is more easily accessible, and possibly quicker and safer, than pills.

The amount of quinine in the beverage is not large enough to be dangerous. It is the last ingredient listed on a bottle of diet quinine water, following carbonated water, citric acid, sodium benzoate and sodium saccharin, which means the amount of quinine is smaller than any of those ingredients. A dose of 25 mg of zinc and 50 mg of magnesium will help.

Side Effects
3. Because it is not approved by the FDA as a treatment for leg cramps, quinine should be used with caution. Side effects could include headache, nausea, ringing in the ears, rash and dizziness.

The Remedy
1. Drink four to eight ounces of tonic water an hour before bedtime. Four ounces contain 15 milligrams of quinine, a very low dose. If you want to relieve the bitter taste, add some fruit juice. Cranberry is my favorite.

Drink Water
2. Drink plenty of water. This helps the body avoid dehydration through strenuous physical activity or exercise. Dehydration is a common cause of muscle cramping, as is a lack of potassium, sodium, zinc or magnesium.

Side Effects
3. Watch for side effects. The FDA cites abnormal heart rhythms, blood hemorrhaging, and other symptoms of an adverse reaction to quinine. You may also feel some nausea, vision blurring and headaches. Discontinue the use of quinine in any form if this occurs.

Relief of Leg Cramps
4. If a leg cramp occurs, stretch the muscle by flexing your foot toward your head. Or get out of bed, stand and put pressure on your heel. Massage the muscle and apply heat if the pain persists.

Stretching
5. Do a stretch routine each night before bed. Press your foot against a wall to extend your calf muscles. While in bed, lay on your stomach and extend your foot over the end of the bed, flexing it to work the calf muscles. Avoid sleeping under heavy or tight covers.

Over the Counter
6. If tonic water does not relieve your leg cramps, try over-the-counter home remedies that contain quinine and other ingredients. Some doctors also suggest taking Vitamin E or a daily multivitamin that contains essential minerals, including potassium.

Quinine powder is found in Peruvian trees and used in very small amounts to manufacture quinine water, also known as tonic water. Tonic water is sometimes used to relieve leg cramps because the quinine is said to relax leg muscles.

Significance
1. Quinine water contains less than 20 mg of quinine, a far lower concentration than the therapeutic dose of 200 to 350 mg indicated to treat malaria. This concentration is considered harmless. However, if ingested in the amounts used to treat malaria, serious side effects can occur.

Side Effect: Skin Rashes
2. Though side effects from quinine water are unusual, people who are sensitive to quinine should avoid it, according to Peoplespharmacy.com. Side effects of quinine include itching of the skin and rashes.

Side Effects: Bleeding
3. A serious side effect of quinine is a blood dyscrasia or abnormality called thrombocytopenia. Thrombocytopenia is a decreased number of the platelets responsible for blood clotting. This can cause significant bruising and bleeding.

Side Effect: Cardiac
4. Cardiac side effects of quinine include chest pain, irregular heartbeat, rapid heart rate and faintness.

Side Effect : Allergic Reaction
5. A serious side effect of quinine is severe allergic reaction. Although rare, quinine can cause swelling of the mouth, face and throat, respiratory distress and seizure.

People with the flu are advised to get plenty of rest, drink plenty of liquids, avoid using alcohol and tobacco and, if necessary, take medications such as paracetamol (acetaminophen) to relieve the fever and muscle aches associated with the flu. Children and teenagers with flu symptoms (particularly fever) should avoid taking aspirin during an influenza infection (especially influenza type B), because doing so can lead to Reye’s syndrome, a rare but potentially fatal disease of the liver. Since influenza is caused by a virus, antibiotics have no effect on the infection; unless prescribed for secondary infections such as bacterial pneumonia.

Antiviral medication can be effective, but some strains of influenza can show resistance to the standard antiviral drugs. Flur-quinones have been shown to have anti-viral and immune stimulating effects. The common source is Tonic water.
What Can Quinine Cure?

Quinine sulfate is an antimalarial drug derived from the bark of the cinchona tree, which grows in Ecuador and Peru. Because of numerous severe side effects, the U.S. Food and Drug Administration in 2007 banned nearly all prescription-strength quinine products, and reiterated that quinine is only to be prescribed for one use—treating malaria. The crackdown caused uproar among people who had been using quinine to treat other problems.

The Problem

1. After accumulating 665 reports of severe adverse reactions to quinine between 1969 and 2006, including nearly 100 deaths, the FDA issued heavy restrictions on the drug’s usage. Quinine can cause abnormal blood clotting, unusual bleeding and irregular heart rhythms, and has been linked to permanent blindness and hearing loss. Quinine can also cause delirium, fever, hallucinations, seizures and many other negative effects. Lawsuits are regularly filed over the problems people have experienced from taking quinine. Quinine can still be found in over-the-counter products in very low strengths that do not cause side effects, and it is also included in tiny amounts in tonic water.

Malaria

2. Quinine kills the malaria parasite that is transmitted by mosquitoes and infects red blood cells. The hazards associated with quinine are considered acceptable in treating certain cases of malaria in combination with antibiotics, because malaria has high rates of permanent injury and death. Physicians usually prescribe quinine for malaria when other medications do not work.

Leg Cramps

3. As of 2007, the only prescription-strength quinine drug still approved in the U.S. is Qualaquin, which is produced by Mutual Pharmaceutical Company. Physicians previously had been prescribing quinine sulfate for the so-called “off-label use” to prevent and treat leg cramps resulting from vascular disease, as doctors commonly do in the United Kingdom and other countries. The FDA has stated that over 99 percent of prescriptions for quinine were for off-label conditions. It is not illegal for physicians to prescribe drugs for off-label usage, but many are reluctant to do so, particularly when the FDA issues strong statements about adverse medication effects.

Varicose Veins

4. Another vascular disorder that quinine is effective at treating is varicose veins. These are swollen, twisted veins in the lower legs that bulge near the surface of the skin, causing pain and tired legs. One remedy for this problem is sclerotherapy, where the physician injects a chemical, such as quinine, into the varicose veins, a chemical that scars these veins so they can no longer fill with blood. Blood then returns to the heart through other veins, and the person’s body eventually absorbs these non-functional varicose veins.

Babesiosis

5. Quinine also can cure a rare malaria-like parasitic disease called babesiosis, which is spread by ticks. Symptoms of babesiosis range from mild flu-like problems to a life-threatening condition.
Remember to minimize exposure to parasites

1. Avoid exposure by not going barefoot, use light sandals, wash foods well, eat at reliable clean restaurants not street markets, reduce contact with mosquitoes, and all blood suckers as best you can, reduce stress while eating and for one hour after.

2. Obey the rules of the stomach so that the stomach acid can kill the parasites before they get to your luscious soft tissues or blood stream. Avoid all dextrose sugars. Use probiotics.

RULES OF THE STOMACH
1. Fluids alone (no more than 4 oz. Of fluid with a meal, or for two hours after a meal)
2. No coffee at meals (wait for 1.5 to 2 hours after or 1 hour before eating)
3. No milk with meals (wait for 1.5 to 2 hours after or 1 hour before eating)
4. Fruits alone (wait for 1.5 to 2 hours after or 1 hour before eating)
5. Mleton alone (wait for 1.5 to 2 hours after or 1 hour before eating)
6. Small meal is better. Quality of nutrition not quantity
7. Slow meals. Savor, enjoy, rejoice, and celebrate the meal
8. Eat for nutrition not for stimulation. Eat when hungry, not when bored
9. Rest comfortably after eating for at least 35 to 45 min to maximize stomach function
3. Spice is Nice, these parasites hate strong spices, use on food not to excess. Ginger, mustard, cayenne, wormseed, wormwood, garlic, clove, black walnut, comfrey, green tea, tea tree oil.

4. SCIO anti stress zap therapy

5. Use teas of the anti-parasitical herbs listed regularly, use tonic water, and well filtered water

6. Papaya and pineapple have enzymes that can weaken and destroy parasites, use the fresh juice often

7. The skins of most fruits have anti-parasite effects, but the citrus have the most, grate up the skins of grapefruit, orange, lime, or use their oil. Use as teas or to put into drinks or food

8. Mexico and other countries have good OTC remedies use for one week once a year.

9. Once a year you and your family should do a parasite cleanse week, use teas 3 x a day, juices 2 x day, extra ginger as a side dish. Use the Desire anti parasite soup once a day for three days. Chop up three onions, 3 tomatoes, 10 cloves of garlic; Cloves; Wormwood; Black Walnut; Green Hulls Pumpkin Seed, some psyllium seed; Milk Thistle; Olive Leaf; Pau d’Arco; Gentian; Echinacea; Barberry; Garlic; Thyme, skins of citrus, simmer at low temp (41 C or 110 F) for 3 hours do not boil, blend in other veg for choice, side of fresh ginger.
Pin worms on a toilet seat.
Why should you be thinking about getting rid of pinworms? Because a pinworm infection is quite possibly the most disgusting thing you’ve ever heard of. Okay, so your child goes to school and somehow breathes in pinworm egg. Don’t scoff, because pinworms are the most common worm infection in the United States. Then, anywhere from two to six weeks, those pinworms will mature and crawl out of your child’s butt and lay eggs near their anus.

It gets better! The pinworm eggs cause your child’s butt to itch, so they scratch at it, and the pinworm eggs get everywhere: under your kid’s nails, on your kid’s clothes, on the bedding, and even in the dust that hangs around your home. Once this happens, your entire family and your kid’s friends and classmates are almost guaranteed to get the same infection. Are you grossed out enough to take pinworms seriously now? Well, here are some things you should know if you want to get rid of pinworms and prevent a pinworm infection. Pin worms can get anywhere for a while even get into your eye.

**Pinworm Treatment**

The first step in getting rid of pinworms is getting tested for pinworms. There are two types of tests for pinworm infections: you either get the butt paddle, which is then examined under a microscope, or you get the butt tape, which is then examined under a microscope. But, this is important, because you shouldn’t go on trying to treat pinworms if you don’t have them. A positive test is your first step to getting rid of pinworms. If you test negative you may just be suffering from hemorrhoids, which are probably more painful and itchy.
Vermox is the most common prescription medicine used to get rid of pinworms. If you test positive for pinworms, chances are your doctor is going to give you a prescription for Vermox (otherwise known as mebendazole), the most common of all prescription drugs used to treat worm infections. Another prescription anti-worm drug is called Albena. It may be wise to ask your doctor or pharmacist which is least expensive because both are equally effective.

Reese's Pinworm Medicine is a very common and very effective OTC pinworm treatment. If prescription medications aren’t your thing, or they’re too expensive, or you don’t have insurance, there are plenty of over-the-counter pinworm medications available that are just as effective as their prescription cousins. The important thing is to treat each member of the family with pinworm medicine to ensure there isn’t a recurring infections caused by a second, third, or fourth family member.

To make sure you get rid of pinworms, wash your bedding and clothing regularly during and after pinworm treatments. Pinworms are an extremely contagious worm infection. The eggs can lay dormant for up to 2 weeks if they’re kept at room temperature, and you’ll find them just about everywhere. This is why it’s important to clean anything and everything the infected person has come into contact with, which includes mopping floors to avoid kicking up dust that may contain worm eggs—causing yet another worm infection.

To avoid getting pinworms again, make sure to wash your hands regularly. Washing your hands and keeping them away from your butt and the butts of others is probably the most effective way to avoid getting a pinworm infection. Pinworm eggs aren’t a particularly resilient worm egg, and any anti-bacterial soap will usually insure a worm-free existence. Remember to wash your hands after visiting public places like schools, gyms, and any large institutions.

More Pinworm Cures

The list of pinworm medications and treatments is plenty long. As I mentioned before, most pinworm medications are equally effective, and are often used to treat other types of worm infections as well—sometimes three or four worms with one stone, or pill, as the case may be. Of the prescription medications available for pinworm infections the two most common are Vermox and Albena. Those are good, but there are plenty of over-the-counter medications that may prove to be cheaper and more readily available. The following is a list of OTC worm medications:

- Pin-X
- Pin-Rid
- Antiminth
- Reese's Pinworm Medicine
- Anything with Pyrantel pamoate.

Of course, if western medicine or commercial pharmaceutical solutions to pinworm infections aren’t your cup of tea, well, there are some natural remedies for pinworm infections found in the sidebar to your right.
White willow bark, known primarily as the original source of salicylic acid (i.e., Aspirin), is also used as a natural remedy for worms. Two capsules (about 800 mg) of white willow bark extract, taken daily for 3-4 weeks (if you can wait that long) should be enough to cure you of a pinworm infection. But, as is the case with many natural remedies, there is no guarantee that this remedy will work. Luckily for you, a pinworm infection isn’t considered a very serious infection, and you can find another remedy if this one doesn’t work out.

Food Grade Diatomaceous Earth, food grade diatomaceous earth, is an interesting substance. It is the remains of single-cell organisms (an algae) from way back in the day when much of the U.S. was still covered in water. It is said that 1 tablespoon of food grade (that’s the important part) diatomaceous earth will cure just about any worm infection, and a number of other intestinal problems as well. Diatomaceous earth isn’t just a good natural remedy for pinworms, but is also used in its various forms, as a natural pesticide.

Diatomaceous Earth

Life on earth is only possible because of diatoms. These very small creatures are absorbing toxins better than anything. They allow us to live by absorbing not only toxic carbon dioxide but they absorb other bio-toxins that could choke off life. When they die their tiny skeletons float to the bottom of the seas and make a layer of diatomaceous earth.

These skeletons are of sharp crystals which maintain a high degree of absorbency. This is what old time homeopaths use to make imponderable homeopathy. They found out that a little diatomaceous earth mixed with water could absorb and transmit energy. Nelson had shown that this was possible for an emotion as well. If we took fifteen people charged with an emotion and they were all told to hold the diatomaceous earth (food grade) with water they could successfully transmit the emotion to it.

Since diatomaceous earth will also kill bugs, worms, and other microscopic critters while not hurting people unless breathed in, the use of a diatomaceous earth and water mixture could have double duty to kill parasites while transmitting an emotion.

Simply prepare a jug of Water with adding 2 to 3 tablespoons of diatomaceous earth (food grade) per 0.5 liter. Shake and pray for the emotion you want every day for 5 min for one week. Then shake and drink 6 to 10 oz of the mixture every day for one week.

This will kill your worms while enhancing your emotions. The following articles tell you more of diatomaceous earth’s properties.
How to Properly Use Food-Grade Diatomaceous Earth

Diatomaceous Earth is the finely ground fossils of prehistoric fresh water diatoms. If you want to chase away that ant, bedbug, flea, or other bug invasion, try sprinkling food grade diatomaceous earth (fossil shell flour, a natural grade diatomite) on the surface where the ants are crawling. Never breathe it in as it’s destructive to your lungs. So put on your industrial-strength dust mask and put a teaspoon of food grade diatomaceous earth around where the bugs crawl and away from the wind where it might blow into the air you breathe.

Learn more about diatomaceous earth at Perma Guard or at Internet Grocer Diatome or at Planet Natural. If you do a search engine key word search of food grade diatomaceous earth, you’ll find many different Web sites listed selling the fossil flour online.

It’s an insecticide, and also at food grade, used to get rid of some types of insects on an animal’s fur. For use of diatomaceous earth with pets such as dogs or cats, see the Wolf Creek Ranch at: http://wolfcreekranch1.tripod.com/defaq.html.

Diatomaceous earth has many uses with plants and animals. Use only food grade diatomaceous earth.

Note: This article and similar articles on uses of food-grade diatomaceous earth of mine also appears in my daily health and nutrition column in the Examiner at: http://www.examiner.com/x-7160-Sacramento-Nutrition-Examiner~y2009m4d16-Eating-fossil-flour.

Diatomaceous Earth

- Diatomaceous earth or D.E. is a light earth or powder-like substance.
- It contains a large quantity of fossilized diatom remains.
- Diatoms are microscopic plants, which possess uniquely shaped shells of silica.
- When diatoms die, their shells settle to the bottom of the lakes, ponds or seas in which they inhabit.
- Since diatoms can number in the quadszillions, when they sink to the bottom they form a thick blanket on the bottom of the water. This blanket is made of almost pure silicon dioxide which over time and under pressure of the water is converted to what we call D.E.
- There are two types of diatomaceous earth that consumers can use today.
- One is sold by swimming pool suppliers as a filtering agent.
- The other can be used as an insecticide by farmers to store grains.
- D.E. is safe for farmers to add to their grain because it exterminates the insects in a physical manner and not a chemical one, therefore it is non-toxic. The diatom shells are covered in sharp spines that will penetrate the flesh of the insect. The ensuing wounds cause fluids to escape and dehydrate the insect resulting in death. Since insect eggs don’t move much and are completely covered in a hard shell, D.E. works best on adult insects or those who are in the pupae stage. D.E. is only dangerous to the insects and is not harmful to humans or cattle due to a natural resistance to diatoms possessed by them. Because of this resistance, farmers can add D.E. to their stored grains or beans without removing it before they go to market.

There are a number of products on the market today that contain D.E. Such products are sold in Canada and the U.S. under the names: Dryacide, Insecto, perma-guard and Protect-It. They are used mainly as grain protectants but are not as effective as chemical insecticides. Research is being done to increase the effectiveness of D.E. by adding it to other processes such as hsbp; Diatomaceous Earth (often referred to as “DE”) is an off white talc-like powder that is the fossilized remains of marine phytoplankton. When sprinkled on a bug that has an exoskeleton (such as an
ant or flea) it gets caught between their little exoskeleton joints. As they move, the diatomaceous earth acts like razor blades and cuts them up. But it doesn’t hurt mammals. We can eat it. We do eat it! It’s in lots of grain based foods because lots of grains are stored with diatomaceous earth to keep the bugs from eating the grain!

Die bugs! Die! Die! Die!

I have heard two explanations of how diatomaceous earth works.

One is that on a microscopic level, the diatomaceous earth particles are very sharp looking. These particles stick to an insect and get stuck between its exoskeleton joints. As the insect moves, it gets physically cut up.

The other explanation is that diatomaceous earth sticks to the insect and somehow causes them to dry out. I think this approach involves scratching the insects waxy layer which then allows precious moisture within the insect to get out. So their teeny tiny bug-innards turn into teeny tiny bug-innards-jerky.

A reader, Sue, in Washington state writes:

Both are true and connected. DE is almost pure silica (with some beneficial trace minerals); under a microscope, it looks like shards of glass (glass is made from silica). On any beetle-type insect that has a carapace, like fleas and cockroaches, the DE works under the shell and punctures the body, which then dehydrates and the insect dies. DE is totally nontoxic. There is no buildup of tolerance like there is to poisons because the method of killing is PHYSICAL, not chemical.

The important thing to us is that if an insect with an exoskeleton gets diatomaceous earth on them, they die. At the same time, we can rub it all over our skin, rub it in our hair, eat it .... whatever ... and we are unharmed.

Farmers dump diatomaceous earth by big scoops in with grains when the grains are stored. It kills the insects that want to feast on the grain. This is a great improvement over the stuff they used to put in with the grain.

Farmers feed gobs of diatomaceous earth to animals in the hopes that it will cure whatever ails them. Many farmers swear that the stuff kills all sorts of worms in their critters.

One strange thing about diatomaceous earth is that for it to work, you have to keep it dry. Even morning dew can make diatomaceous earth ineffective.

I have encountered over a dozen ignorant boobs that have proclaimed “Diatomaceous Earth does NOT work!” I have read this statement in all caps. In extra big fonts. With italics. And I’ve even had it screamed at me. I’m gonna stick with “ignorant boobs”. On closer inspection of each case there is always a flaw. Usually the problem is that it was not used correctly. Diatomaceous earth is not a bait. If you put a little bit in a pile somewhere, the bugs are not drawn to it and invite all their friends. I kinda wonder if the pesticide companies pay people to go to internet forums and say this sort of thing. Diatomaceous earth is super cheap, non toxic, and generally more effective than anything the pesticide companies have to offer - so it kinda cuts into their profit margins a bit. I’ve been meaning to create an experiment to set the record straight on this topic, but a participant in the forums here, Stephanie, beat me to it: I tried my own experiment with the diatomaceous earth to see how quickly it kills the fleas; I caught a few fleas and put them in a jar with a pinch of diatomaceous earth - all were dead within just a couple of hours.

It just doesn’t get any more clear than that.

How safe is diatomaceous earth?

The only concern about this stuff is that if you throw diatomaceous earth into the air, you can make a big cloud of the stuff. Breathing that in can irritate your lungs. Just as breathing in anything other than pure air can irritate your lungs. The same concern applies to pastry flour, talcum powder, corn starch or dust on the wind from outside. The dust that gets into the air from emptying your vacuum cleaner bag is probably far worse for you than diatomaceous earth dust.

I have heard from two people that said that they won’t use diatomaceous earth anymore because “the tiny particles cut my lungs!” --- (deep sigh goes here) All I can say is “Did you actually examine your lung with a microscope and watch the diatomaceous earth cut into it?” - of course, they did not. I think the truth behind these reports is that these folks heard how diatomaceous earth works, and when they would breathe in the dust, it would make them cough - just as breathing in flour or corn starch would make you cough. And then they thought of the sharpness at a microscopic level. My understanding is that when diatomaceous earth becomes moist, the sharp thing is no longer happening. That’s why you have to keep it dry when you use it.

Gimmie gimmie gimmie!

There are a lot of varieties of diatomaceous earth, so when you are shopping, be sure to get the right stuff!

I strongly suggest that you get food grade diatomaceous earth. Some people make 3% of the food they eat diatomaceous earth. I don’t fully understand why they eat that much, but ... oh well. I do know that diatomaceous earth is used heavily in storing grains - so you are probably already eating lots of diatomaceous earth every time you eat any commerical grains.

Other people feed it to their animals. Again, a bit of a mystery to me. Farmers think that diatomaceous earth will reduce parasites, but I don’t see how that will work.

Some places sell the diatomaceous earth mixed with other stuff. And that is something I do not recommend. When I see a label that says “97% diatomaceous earth” I have to wonder what the other 3% is. If the packaging is about killing bugs, is it some sort of toxin? Did they add something like borates or pyrethrin for a little extra kick? I don’t want that!

Some places sell diatomaceous earth that is for swimming pool filters - that is definitely what you do NOT want.

Some places sell an 8 ounce shaker. I think it is wise to get at least a few pounds of the stuff. It keeps well (it’s already millions of years old) and is useful for so many things. And if you get too little, you are likely to not use enough.
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Big Tobacco, Big Sugar, Big Pharma, Big Oil, and Big War Industry are exempt from lay and they kill and injure, maim and cripple in the name of profit. They seek to control and dominate medicine to further build their profits.

Their money controls governments, regulators, and the small minded media. The Ultra Rich Master Echelon Computer now sees and hears all the things we say, write, and do. Rights of privacy are gone worldwide. They have taken away our rights of free speech.

The Ultra Rich control the media and refuse to tell stories that expose or offend the Ultra Rich Power. They control every movie that gets distribution, every song that hits the radio, everything that is put on the world news. They use science and psychology to control and manipulate the minds of the masses.

But medicine is controlled by Universities that teach medicine. There is now one university starting to defend Natural Medicine. IMUNE has a new 12 month home study course that can be bought with Karma and you can learn how to do natural medicine and how to break free from the Ultra Rich control.

The game of Reality Monopoly is still being played all over the world. One percent of the world’s population is winning and now controls over 80% of the wealth. The law allows the game to continue till we will see one winner and 6 billion plus losers.
QED Biofeedback, Gut Dysbiosis & Hypomonocytosis Clinical SOAP Correlation Study

IRB supervision: Under the supervision of Ethics International of Romania acting as the IRB for this study under rights of International law. This study was commissioned by Ethics International in 2001.

Gut Dysbiosis multidimensional analysis is compared to bioelectric Quantum Electro Dynamic Biofeedback (QEDBF). QEDBF's key VARHOPE & Cellular Vitality Index (CVI) indicators are clinically correlated with subjective clinical context of stress to determine if they reliably mirror conventional of systemic Hyper or Hypo-Monocytosis, Hyperlipidemia, and Hyperuricemia, or other Immune indexes that indicate confirmation of the activation of the immune cascade (called the TH2 Induction Stress Response which leads to lymphoma and autoimmune disease). We intend to determine how and where QEDBF can be used as a prediagnostic integrated medicine tool to help navigate personalized health record by providing a safe, reliable and objective non-invasive bioenergetic information gathering tool.

In particular, the body electric and its bioterrain balance were measured and show ill health may ensue as a result of low mineral resistance causing abnormally high conductivity. Vitality can be measured now with QEDBF to indicate states of Low Resistivity, along with reliable detection of low adrenal Voltage and lymphatic Amperage for drive and willpower, along with indicators of pH balance, Phase Angle of cellular permeability, Resonance Frequency Pattern to objectify anxiety states or exhaustion, Reaction Speed to indicate enzymatic response, and other electrical measurements to indicate Cellular Vitality Index (CVI). The data gathered efficiently and safely by the addition of the integrated medicine tool QEDBF provided a bird's eye view at a fraction of the time and conventional laboratory costs, while successfully mapping many suspected but heretofore hidden stressors and especially pathogens leading to gut dysbiosis. These repeatable, predictable disease patterns are reliably detected electrically with QEDBF and hint in advance at the unfolding of chronic illness, which predictably cause increased morbidity and mortality in middle aged, ambulatory community based patients seeking stress, pain and relaxation management.

Principal Investigator: Dr. Deborah Anne Drake, BSc, MD, CCFP(EM), FCFP, CQI
Nutritionist Jennifer Hough, Research Nurse Practitioner Joanne Hunter, Research Assistant Darria Pressey, Statistical Assistant Electrical Engineer Vivian Jones

Abstract
This Gut Dysbiosis study to quantify immune induction, comparing old to new tools like biocommunication scanners like the QEDBF, is the first study of its kind in Canada to confirm the safety and efficacy of the Quantum Electro Dynamic Bio- Feedback (QEDBF) using the Electro-physiologic Feedback Xrroid or EPFX scanner as well as to confirm the recognition of bioterrain disruption. We map with subjective surveys, compared to conventional and complementary testing methods to map the lay out of the immune systems, nutrition, toxic load, mood, social stress and other factors like Candidiasis, parasite overload or celiac disease. We compare the QEDBF findings with the high clinical suspicion that stressed individuals, as determined by low peripheral white blood cell absolute Monocyte count, may harbor occult pathogenic infections. We studied 50 voluntary, ambulatory, community based male and female middle aged patients in great detail, using 7 health surveys, dozens of conventional and research screening tests in hematology, biochemistry, autoimmune, specialized brain cerebro-ganglioside markers. We tested a further 50 subjects with QEDBF for comparison and trends, and further compared 10 randomly selected subjects to be evaluated with QEDBF testing. The goal is to determine what historical, risk, or symptoms, signs or lab tests provide the forwarning. It appears through observation that illness and immune induction are forcast when the bioterrain conditions permit loss of homeostasis. This study focuses on the correlation of hyper or hypomonocytosis with low Resistivity, [low grounding minerals from a variety of causes]. We correlate stress and exhaustion from biochemical and bioelectric perspective and attempt to map under close research control, the comparison of conventional and bioelectric impairments, using bioelectric vectors, called VARHOPE score, Cellular Vitality Index (CVI and Phase Angle (PA).

Furthermore, we predict the worse the electrical grounding and mineralization, as detected with low Resistivity scores, the higher the prevalence of subsequent bioterrain shift, and thus colonization of a change in flora, ultimately culminating in reduced infection resistance, Candidiasis, Fungal and pathogenic overgrowth, and the resultant induction of the immune cascade which should be measureable. The worse the homeostasis, we predict the worse the oxygenation, hydration and nutritional status, digestion and weight. The lower the cellular vitality index (CVI), we predict the worse the healing speed or increased chance of infection or relapses, leading to higher than normal rates of Signal Transduction Pathway immune cascading, leading to chronic illness, and the 4 top North American Disease Killers – Cardiovascular, Cancerous , Autoimmune diseases and iatrogenic death. (This preventable escalating predictable cascade follows the Autoimmune/ TNFalpha/Celiac tri-genesis on chromosome 6, triggering the TH2 Signal Transduction Pathway of body defense and stress response, leading to platelet aggregation, Betaoncogene induced Lymphoma, and Interleukin IL6 & IL8 Inflammatory cytokines and White Blood Cell Neutrophilic degranulation.)

If left unattended with insufficient recognition of deep hidden gut dysbiosis, the continuous triggering of the immune system can result in serious or even deadly morbidity and mortality. This degenerative cycle is preventable but is escalating in numbers from lack of recognition and early intervention, coupled in part due to the aging population, and the increasing toxicity, especially of local heavy metal toxicity in the mouth with amalgams initiating bioterrain shifts. The culmination of this immune triggered sensitivity from unrecognized Gut Dysbiosis and Acquired Celiac Disease coupled with Autoimmune reactions is difficult to measure in the laboratory or microbiology lab due to the inherent immunosuppression from chronic infection or metal toxicity. This study determines whether new bioelectric tools can detect the GAP where detection is beyond the scope of more traditional if not old fashioned biochemical modalities and where subclinical, symptomatic illness can be measured by bioresonance signature recognition of Quantum Biofeedback called QEDBF.

Once the full spectrum of health is reviewed here over all Subjective, Objective, Assessment and Planning Tools, this study clearly shows gross misdiagnosis risk due to key hidden information unearthed through non invasive QEDBF scanning. This study shows as expected in the null
hypothesis, the presence of a large, measurable but previously hidden incidence of Gut Dysbiosis, heavy metal toxicity, and mental exhaustion associated with the early warning signs of costly diseases. Without this type of bioenergetic QEDBF “warning” system to quantify the stress response and these many hidden pathogenic infections missed by routine laboratory testing, the Health Care System is missing a GAP in detection, early screening and intervention. This GAP in Bioterrain Detection is postulated to lead in turn to ultimately higher health care costs, waste, mistakes, time delays, and misuse of resources, all of which could be preventable with information, detection and early warning signs interventions. This study evaluates favorability of the QEDBF EPFX in its safety, efficacy and tolerability and usefulness as a prediagnostic stress evaluation tool. In addition we use the Subjective Surveys for clinical context to correlate Gut Dysbiosis to the Objective Assessments using Laboratory, Research and Electrodermal testing, and later to compare this with subsequent QEDBF VARHOPE and CVI and Phase Angle (PA). These indicators provided valuable navigational information, easy to interpret percentage scores as real time, highly specific and sensitive bioenergetic indicator for stress detection. In addition, the QEDBF was evaluated for its favorability to help better navigate, prevent iatrogenic mistakes or illness and to “Fill the GAP” in pathogenic “Risk Profiling”, for personalized Electronic Health Record information gathering in a timely, cost effective, non invasive way that serves as a prediagnostic screening and triage tool, safe, portable and suitable for a myriad of health care setting uses.

**QED Biofeedback, Gut Dysbiosis & Hypomonomocytosis Clinical SOAP Correlation Study**

Quantum Electro Dynamic Biofeedback (QEDBF) VARHOPE & Cellular Vitality Index (CVI) indicators are clinically correlated to determine if they reliably mirror conventional of systemic Hyper or Hypo-Monocytoysis, Hyperlipidemia, and Hyperuricemia, or other immune indexes that indicate the TH2 Induction Stress Response. Thus QEDBF can be used as a prediagnostic integrated medicine tool to help navigate personalized health record by providing a safe, reliable and objective non-invasive bioenergetic information gathering tool. In particular, the body electric and its bioterrain balance were measured and show ill health may ensue as a result of low mineral resistance causing abnormally high conductivity. Vitality can be measured now with QEDBF to indicate states of Low Resistivity, along with reliable detection of low adrenal Voltage and lymphpatic Amperage for drive and willpower, along with indicators of pH balance, Phase Angle, Resonance Pattern, Reaction Speed, and other electrical measurements to indicate Cellular Vitality Index (CVI). QEDBF provided a bird’s eye view at a fraction of the time and conventional laboratory costs, while successfully mapping many suspected but heretofore hidden stressors and especially pathogens leading to gut dysbiosis, which predictably cause increased morbidity and mortality in middle aged, ambulatory community based patients seeking stress, pain and relaxation management.

**Principal Investigator: Dr. Deborah Anne Drake, BSc, MD, CCFP(EM), FCFP, CIQ**

**Nutritionist Jennifer Hough**, Research Nurse Practitioner Joanne Hunter, Research Assistant Darria Presley, Statistical Assistant Electrical Engineer Vivian Jones

**Location**: Health Cirquet Integrated Family Medicine Center, #311- 6633 Hwy 7 East, Markham, Ontario, Canada, L9L 3P6 905-294-3322. Copyright 2002, 2009 All Rights Reserved.

**Study Goals**

1. Investigate with integrated medicine techniques an overview map of health and illness progression in middle aged men and women in community medicine in Markham, Ontario, Canada
2. Investigate the SOAP method using surveys, laboratory, research tests, and new methods of electrodermal biocommunication.
3. Determine the safety and efficacy of QEDBF as a prediagnostic triage tool.
4. Determine if QEDBF can pick up the bioresonance of the hidden pathogens in the GAP causing Gut Dysbiosis, as compared to conventional laboratory testing
5. Determine if the VARHOPE and CVI scores of QEDBF are correlated with the actual subjective and objective reports of study subjects
6. Determine the Cost of the QEDBF compared with laboratory screening.

**Method**

In order to evaluate gut dysbiosis associated with bioterrain shifts in pH, ORP and Mineralization, as compared to impairment in Monocyte count as the key indicator of immune induction. This study will evaluate gut dysbiosis prevalence in stress, pain and relaxation problems. This Integrated Medicine study was done in a double blind, randomized, prospective fashion, using evidence based medicine tools of the highest available specificity and sensitivity to evaluate the reliability, sensitivity and specificity of using subjective surveys, compared to allopathic conventional medicine investigations as compared to Complementary & Alternative Medicine (CAM) tool called Quantum Biofeedback (QEDBF) in gut dysbiosis detection. Dr. Drake’s null hypothesis that missed infections may be very prevalence in chronic fatigue, immunosuppressed and stressed patients, but these infections are under-recognized, hidden or adapted to, especially in the gut, causing a continual source of demineralization and malnutrition, acquired celiac disease induction. If left unattended, these gut dysbiosis pathogens or other infections will eventually exhaust the body defense “Seleye Stress Response” known as the Fight, Flight or Freeze response, leading to immune failure. This study measures this subjective and objective stress response from a social, laboratory, bioelectric and immune system perspective to confirm or deny these suspected trends.

**Definitions**

SOAP stands for Subjective, Objective, Assessment and Plan, a typical charting annotation style for medicine practitioners. QEDBF stands for Quantum Electro Dynamic Biofeedback, using the EPFX model, which is the acronym for Electro-physiologic Feedback Xrroid. Xrroid connotates a two way rapid feedback computerized loop to ensure safety and speed along with patient to computer interface. VARHOPE stands for Voltage, Amperage, Resistance, Hydration, Oxygenation and Proton Electron Pressure. This VARHOPE score provided by the QEDBF scanner (EPFX) represents 3 vectors of the bioelectric field integrity as measured by the Adrenal Catalacholamines for drive called Voltage, Serotonin stores for “Willpower” called Amperage, and grounding and enzyme cofactor initiation with Resistance from minerals conductivity, along with Hydration and...
Oxygenation for enzymes function, and the Acid Base Balance for pH, and the Proton (H+) vs Electron (H2-) pressure for Oxidative Reduction Potential (ORP).

**Objectives**

Our goal is to define the tools that reliably measure bioterrain shift that must induced pH, ORP and Mineral abnormalities that interfere with natural homeostasis. Once the bioterrain is disrupted, it is easier for pathogens to invade the new and permissive pH of the altered gut flora and continue the vicious cycle, predictably causing escalating risk factors for both inflammatory and degenerative conditions. The goal of non invasive, cost effective, preventative medicine through early detection and intervention is to save the patient time, money, morbidity and morbidity, along with the obvious reduction in risk, delays, mistakes and pressure on the overtaxed Canadian Health Care System.

**Equipment**

In this pilot study, the rate of positive predictive value of low laboratory hematology of Absolute monocytes (Less than .5) with low cellular vitality as compared to significant gut dysbiosis pathology, was determined to detect the risk profile, pathogens differential, rule out thyroid or adrenal disease to cause demineralization, loss of electrical resistance, (low Resistivity promotes high conductivity of cancer and inflammation). We hope this information can be used to Guide Health Canada into confidence with the safety and effectiveness along with the plethora of time delays, mistakes and pressure on the overtaxed Canadian Health Care System.

This Study will specifically determine the prevalence of bioelectric VARHOPE and Vitality percentage scores and post QEDBF improvement. It will secondly determine the reactivity of various pathogens noted in low resistance clients. In particular, we are interested in the rate of gut dysbiosis, often missed in conventional testing, but notable on bioresonance testing. These occult infections at low level below serological detection still appear to trigger sufficient if not amplified immune reaction that other acquired celiac, autoimmune and TNFA cytokines are presumed to be triggered, accounting for the stress and TH2 immune response which induces the stress cycle, as triggered by intestinal eosinophils and blood monocytes release of histamine, which triggers Stomach Rennin, Adrenal Angiotensin, accompanied by stress in corticosteroid, mineral corticoids, brain neurotransmitters, and reactions in the brain centers of Hypothalamus, Pituitary and Pineal gland.

Methods: In order to evaluate gut dysbiosis, 50 subjects were intensely surveyed with paper, physical, laboratory, electrodermal testing. This was done in order to determine the clinical context and to determine the spectrum of Monocytosis and its accompanying bioterrain shift. The study maps in many ways the triggering of the immune cascade, bioterrain shift and induction of gut dysbiosis, gluten sensitivity, heavy metal toxicity and autoimmune triggering, using the clinical evaluation categories called "SOAP" method employed to evaluate the Subjective, Objective, Assessment and Plan of evaluation or therapy. In particular, our end point of evaluation of stress was to correlate an absolute monocyte count shift up from normal .5 to >.6 for acute, or <.4 for chronic pathogens, as compared to the Surveys (Candida, Heavy Metal, Wilsons Syndrome, Depression, Nutrition, Social Stress, Illness Severity, Laboratory) to the Bio-energetic electrodermal indicator (Listen Testing or QEDBF with highly specific and sensitive VARHOPE and CVI or cellular vitality index, Proton Electron Pressure for estimation of pH, ORP, Resonance, Reactance Speed, Phase Angle of tissues along with impedance measures.)

**Outcome Measures**

The premise of this study is to identify the correlation between patients with low Monocyte count indicative of an induced immune cascade of TNFA, Celiac and Autoimmune induction, and then derive from this subgroup, which patients had detectable gut dysbiosis to account for their hypomonocytosis. We then used this subgroup to determine the top subjects with low monocytes to calculate the positive predictive value of low VARHOPE and low CVI and to detect the prevalence of Gut dysbiosis in them compared to normal subjects. We then use aggregate analysis to compare this cohort by historical features of 7 health surveys to understand the clinical context of the symptom patterns, in association with laboratory and bioelectric scores to find common symptoms and signs or unweigh trends that are validated by the investigations. In this way we hope to validate the theory of gut dysbiosis, validate this new QEDBF equipment as a reliable safe and efficacious investigation tool, and determine the trends in efficacy of such a new personalized and detailed biotechnology methods of metabolic mapping, as compared to serology, biochemistry, hematology and cultures.

- See Table 1 QEDBF in Gut Dysbiosis Related to Drake Severity & Hypomonocytosis
- See Table 2 QEDBF in Gut Dysbiosis Related to Crook Candida Questionnaire
- See Table 3 QEDBF in Gut Dysbiosis Related to Hamilton Depression Scale
- See Table 4 QEDBF in Gut Dysbiosis Related to Wilson's Syndrome
- See Table 5 QEDBF in Gut Dysbiosis Related to Nex Mercury Amalgam Survey
- See Table 6 QEDBF in Gut Dysbiosis Related to Nutrbiotic Nutritional Assessment
- See Table 7 QEDBF in Gut Dysbiosis Related to Social Adjustment Stress Scale
- See Table 8 QEDBF in Gut Dysbiosis Related to Weight Management & BP
- See Table 9 QEDBF in Gut Dysbiosis Related to VARHOPE & CVI
Findings

The findings of this extensive, cross case comparative analysis, using community based aged matched, prospective, double blind, randomized, placebo controlled trial methods and highly specific and sensitive tools is profound and confirms the null hypothesis of low resistance leading to disease. In particular, this study indicates that many pathogens lead to occult gut dysbiosis, and that Gut Dysbiosis is alarmingly prevalent and that missed infections are undetectable by conventional means but clearly visible at subtle levels detectable by QEDBF. The bioelectric field detection of low resistance was highly predictive of immune failure, malnutrition, and loss of resistance to disease, along with invocation of the stress response. The QEDBF information was highly specific (> 85%) for detection of pathology in the aberrancy of the electric holographic signal reactions by the body, and was useful in detecting infections not found by conventional laboratory means. While the QEDBF is not licenced for diagnosis, the QEDBF results offers highly reliable and clinical credible information to help with prediagnostic information gathering, therapy selections, avoidance of medical mistakes and drug errors, allergy detection, and many other helpful indicators to guide the health care practitioner to better, more safely, more timely and more accurately attend to the true issues of highest priority. In particular, QEDBF was reliably able to detect stress and exhaustion with low resistivity and other VARHOPE score abnormalities, including the pH by QEDBF to indicate the bioterrain shift and pathogenic load. This offers an excellent new avenue of non invasive, cost effective, safe, efficacious applications of quantum biofeedback in Canada as adjunctive biocommunication monitoring for large volumes of useful and precise, personalized information in complex cases, presented efficiently in rapid safe and user friendly medical records, proving the EPFX is a very valuable modern tools which can be professionally relied upon by Health Care Practitioners of all subspecialties in the Allopathic, Complementary, Alternative and especially the Integrative Medicine.

Zapping the Human Papilloma Virus

By William Nelson LPCC

At the Semmilvise Hospital in Budapest 1994

Abstract

We know of no good evidence for Dr. Krugers zap therapy. The Zap technology of the QXCI/EPFX has some tested capabilities. In this study 25 women showed signs of papilloma virus spots. The papilloma virus HPV spots fluoresce in UV light if they are exposed to vinegar. A vinegar swab showed spots on all 25 with an average of 12 spots per person. The women were given three 30 min QXCI Zap therapies over the course of one week. In 2 of the subjects there was no change. All of the others had lessening of their spots in size and number. In five subjects there was complete removal of the spots. The rest had approximately 60% reduction in the number of spots. The overall average therapy was 60% effective in treating papilloma.

A SHORT STUDY OF COMPARISON FACTORS OF COPROLITH VERSUS QXCI DETECTION OF INTESTINAL PARASITES

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This study was performed in 1984 at the King Health Center in Lowellville, Ohio, USA Revalidation and further clinical testing and has been repeated by medical doctors at the Homeopathy Clinic in Budapest, Hungary and by the doctors listed above.

ABSTRACT

In this study a group of 44 patients from ages twenty-five to fifty were chosen who displayed signs of worms from symptoms, anal itching, rhinitis, etc. All were asked to provide a stool sample and to get a QXCI evaluation. Thirty-nine showed positive coprolith worm eggs. The same 39 were positive with the QXCI testing for worm reactivity, and there were two additional patients that were negative from stool analysis that were positive on QXCI EPR (electro-physiological reactivity). Further stool analysis found the two to have eggs on a different day. This raised doubts on the accuracy of the stool analysis, while reinforcing the accuracy of the QXCI.

KEY WORDS
Intestinal parasites, Vermex, nematode EPR.

HYPOTHESIS
It is our hypothesis that the QXCI EPR testing is as accurate as the current stool test done in clinics today.

METHODS AND MATERIALS
Forty four patients were taken from a medical practice in which the patients selected were good candidates for having intestinal parasites.

All were asked to provide a stool sample and to get a QXCI evaluation from competent biofeedback therapists.

The nematode analysis was done by standard coprolith analysis, which was accomplished by taking a stool sample from each patient and extracting from it a section of the sample about the size of a large marble. This was then put into a sugar solution. The eggs would float to the top, and could be separated from the tube with a cover slip.

The eggs and egg parts were then counted to determine the approximate number of nematode eggs in each sample. In the table (see Appendix) the circles show us the number of nematode eggs discovered in each sample. In the test group, we can see that thirty-nine cases had some eggs. There was approximately twenty nematode eggs, four had eighteen, seventeen and nineteen, and three cases had ten eggs. In several patients, there are a similar number of nematode eggs.

All subjects were given a professional QXCI evaluation. The same thirty-nine were positive with the QXCI testing for worm reactivity, and there were two additional patients that were negative from stool analysis that were positive on QXCI EPR (Electro-Physiological Reactivity) while being negative on stool analysis.

A further stool analysis test found the two to have eggs. The stool analysis is not as thorough as first assumed. There is a great chance for false negatives.

During the three-week test period, the patients were asked to eat normally, and were given no other instructions. They returned after three weeks with stool samples. The test was repeated, and the x's in the figure show the number of remaining nematode eggs. There was evidence for the OTC homeopathic's ability to reduce or remove worms from the study.

RESULTS
Neither the QXCI practitioner nor the coprolith analysis specialist was aware of which sample he was studying. They were simply supplied subjects. The results are shown in both figures. We can see that the QXCI was successful at detecting the presence of nematodes in comparison to counting eggs appearing in standard coprolith analysis.

DISCUSSION
The QXCI seems to be a helpful tool for detecting the presence of worms in a system.

As we have already outlined elsewhere, the homeopathic product Vermex, seems to be able to not only clean out the intestines, but also appears to stimulate the immune system to deal with the nematodes directly.

PART 2

ABSTRACT

In this study a group of 20 patients from ages twenty-five to fifty were chosen who displayed signs of worm eggs on coprolith (stool) analysis. The patients were divided into two groups of ten patients each. One group received treatment with a combination homeopathic product known as Vermex, which contains various homeopathics that stimulate the defenses of the system against parasitic intrusion, and also homeopathics that help to flush out the intestinal tract. The other group was given Standard Process enzyme therapy in a pill called Zymex, whose ability to rid the system of parasites through its enzymatic effects was claimed by various doctors.

The patients in each group were then remeasured. It was found that the Vermex product was successful in treatment, whereas the Standard Process product seemed to show no positive effect.

KEY WORDS
Intestinal parasites, Vermex, nematode.

HYPOTHESIS
It is our hypothesis that a homeopathic product can be utilized to stimulate the immune defenses of a human organism against intestinal parasites.

METHODS AND MATERIALS
Twenty patients were taken from a medical practice in which two lines of products were used: one was a homeopathic, and the other an enzymatic therapy.

The patients were random-sampled into two groups of ten patients each. One group was given instructions to take Vermex at ten drops, three times a day for three weeks. The other group was given Zymex enzymatic therapy, and told to take two pills after each meal for three weeks. The
three-week period was chosen because most nematode eggs go through a twenty-one-day cycle. By using therapy for three weeks, we would expect the best results.

The nematode analysis was done by standard coprolith analysis, which was accomplished by taking a stool sample from each patient and extracting from it a section of the sample about the size of a large marble. This was then put into a sugar solution. The eggs would float to the top, and could be separated from the tube with a cover slip.

The eggs and egg parts were then counted to determine the approximate number of nematode eggs in each sample. In the table (see Appendix) the circles show us the number of nematode eggs discovered in each sample. In group 1, we can see that three cases had approximately twenty nematode eggs, four had eighteen, seventeen and nineteen, and three cases had ten eggs. In group 2, there are a similar number of nematode eggs. During the three-week test period, the patients were asked to eat normally, and were given no other instructions. They returned after three weeks with stool samples. The test was repeated, and the x’s in the figure show the number of remaining nematode eggs.

RESULTS

Neither the practitioner nor the coprolith analysis specialist was aware of which sample he was studying, or from which group they came. The results are shown in both figures. We can see that the Vermex was successful during the three-week period at lowering the number of nematode eggs appearing.

In the enzyme therapy group we see that there was no effect by the enzyme therapy on the nematode eggs. We conclude from this that the enzyme therapy does nothing to control nematode infestation, whereas the homeopathic helps the system deal successfully with these intestinal parasites.

DISCUSSION

As we have already outlined, the homeopathic product seems to be able to not only clean out the intestines, but also appears to stimulate the immune system to deal with the nematodes directly.

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Helminthic therapy

Helminthic therapy, a type of immunotherapy, is the treatment of autoimmune diseases and immune disorders by means of deliberate infestation with a helminth or with the ova of a helminth. Helminths are parasitic worms such as hookworms and whipworms. To live in the human body the hookworm sends out information that lowers the immune system so that he can live there. Thus the hookworm can be use for hyper immune diseases. This is a prime example of Symbiosis.

Helminthic therapy consists of the inoculation of the patient with specific parasitic intestinal nematodes (helminths). There are currently three closely related treatments available. Inoculation with Necator americanus, commonly known as hookworms, or Trichuris suis ova,[2] commonly known as pig whipworm eggs, or inoculation with Trichuris trichiura ova,[1] commonly referred to as human whipworm eggs.

Helminthic therapy has emerged as one possible explanation for the low incidence of autoimmune diseases and allergies in less developed countries, together with the significant and sustained increase in autoimmune diseases in industrialized countries. Current research and available therapy is targeted at, or available for, the treatment of Crohn’s disease, ulcerative colitis, inflammatory bowel disease (IBD), multiple sclerosis, asthma, eczema, dermatitis, hay fever and food allergies.

Infectious Necator americanus \( L^3 \) Larva.

Invisible to the naked eye, from 10 to 35 are applied to the skin in therapy, either in a single dose or in multiple smaller doses over the course of two or three months.

There is the story of a man in California with excessive allergies. He was constantly distraught with allergies. He heard of what the hookworm could. No one would give him the worm, so he went to Africa and walked barefoot in the shit where known hookworms were. As per their name the hookworm hooks into the skin and can penetrate healthy foot skin. He finds his way to the gut and live there. The hookworms lower his immune system and then he found allergy relief. Now he makes a living selling his shit to other people.

Musician Scott Richards and artist Debora Wade are two Bay Area patients on the hookworm treatment. Richards and Wade both suffer from an inflammatory bowel disease called Crohn’s. When faced with using a parasite as therapy, both patients felt they had nothing to lose.

For starters, Crohn’s is an excruciatingly painful immune system disorder that causes the intestines to swell and empty frequently. Some believe the body’s immune system is overreacting to food and bacteria that would normally be found in the intestines.

Wade was diagnosed as a child, and says she often goes to the bathroom numerous times during the day, and often ends up bleeding into the toilet. "The pain would be so severe, that I’d just be sobbing," she said.

Gastroenterologist Dr. Jonathan Terdiman of the UC San Francisco Medical Center has treated Richards and Wade for years. Crohn’s is a destructive immune disorder, Terdiman said, adding "your body’s immune system is over-reactive or hyper-reactive to things in the environment. Most importantly to bacteria that are in your bowel. And you have a reaction that ultimately damages the bowel."

The bowel can rupture, ulcerate, tear or perforate. Patients lose a lot of weight. And there is no cure for this disease. Medications can keep symptoms at bay, but can have serious side effects or even stop working.

Richards said that he and his wife would hear about a medication and then hear about its side effects which in one case, including cancer; and in another case, included a serious brain infection. The choices are draconian.

Wade said, "You get to the point that there’s nothing to do to help you, there’s no medicine left that works. And all you have to do is suffer, every day and night for years straight."

Both felt hopeless until hookworms came into their lives. Hookworms are parasites in search of a host which can be a human.

In order to live as a parasite inside the human, the parasite must convince the host’s immune system to chill and not try to reject it. With hookworms, they secrete a chemical that distracts the immune system, dampening down its response. Hookworms are common in undeveloped countries, places where inflammatory bowel disease is rare.

In the United States, thanks to advances in modern sanitation techniques, hookworms are rare but immune disorders on the rise.

Is there a connection? There could be.

"As we have made things more hygienic," Dr. Terdiman explained, "we may in fact be precipitating
an outbreak or an increase in the frequency of these immune disorders."

Studies suggest the presence of hookworms in the human gut may be beneficial, secreting a chemical that turns off an overactive immune response. But the therapy is not regulated by the Food and Drug Administration.

To fight their disease, Scott and Debora had to procure worms a different way. They both signed up to get infected with the hookworms.


Aglietti believes patients who contact him are “true pioneers,” he said. "(They're) going off the medical grid. That most doctors have no idea of this therapy. In fact, they've never seen a hookworm." Aglietti, who calls himself a gastrointestinal ecologist, takes clients across the border where he gives them a band aid to put on their arm. On the gauze on the band aid, there is hookworm larvae.

Scots said he experienced some itching where the band aid was, which he understood, was the larvae making their way into the blood stream.

What happens next is the hookworms then travel from the blood stream into the lungs, where once there, causes the patient to naturally cough. Patients then cough the microscopic helminthes up into the throat, then swallow them, and this is how hookworms get to the intestines, where they latch on, and they begin to mature.

Wade got her hookworms directly from a business in Santa Cruz. The business, Autoimmune Therapies, is run by Jasper Lawrence, who guarantees infection for three years if you buy the helminthes through him. One dose costs $3,900.

Both Richards and Wade say they didn’t have to wait long to feel relief.

Richards explained waking up and the pain suddenly gone. For Wade, she needed to be reinfected, but today said she can eat foods that patients with Crohn’s could never eat: pizza & Thai food for example. And, while helminthes therapy is not regulated by the FDA, Dr. Terdiman admits he is an interested observer in all this.

"It's not a therapy that I can officially endorse or condone," Dr. Terdiman said. "But at the same time, there is a growing body of science that suggests that this makes some sense. It's not a crazy idea."

Some believe the therapy may help a whole host of immunological diseases, including asthma, allergies, even multiple sclerosis. But the hard evidence is lacking.

Wade believes it’s because no one is willing to fund research involving helminthes. She said few researchers are looking into hookworms as therapy, and that she’s not willing to wait for the results.

"The options we have are just so pitiful, and when millions are spent for the options, and then not put any money into this research, I mean I'm not frustrated, I'm extremely angry," she said.
Bacteria Infection - Bacteremia

Part of the Following:

Large Scale Study of the Safety and Efficacy of the SCIO Device

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This study was performed in the field by practicing Biofeedback technicians. Data was collected and the study supervised by the Ethics International Institutional Review Board of Romania. The Data analysis and study presentation is done by The Centro Ricerche, University of Venice + Padova, Italy

Abstract
This study demonstrates the safety and effective qualities of the SCIO device used in a large scale study. A large scale study of over 97,000 patients with over 275,000 patient visits reported their diseases. Many of them reported this disease. And the results of their therapy is reported in this study.

Introduction
Overview
This large scale research was designed to produce a large extensive study of people with a wide variety of diseases to see who gets or feels better while using the SCIO for stress reduction and patient monitoring. The SCIO is a evoked potential Universal ElectroPhysiological Medical apparatus that gauges how an individual reacts to miscellaneous homeopathic substances. The device is registered in Europe, America, Canada, Asia, and S. America. The traditional software is fully registered. Some additional functions where determined by the manufacturer to be worthy of evaluation. Thus a study was necessary to determine safety and efficacy. (As a result of these studies these functions are now registered within the EC)

An European ethics committee was officially registered and governmental permission attained to do the insignificant risk study. Qualified registered and or licensed Biofeedback therapists where enlisted to perform the study. Therapists were enrolled from all over the world including N. America, Europe, Africa, Australia, Asia, and S. America. They were trained in the aspects of the study and how to obtain informed consent and transmit the results to the ethics committee or IRB (Institutional Review Board).

2,569 therapists enlisted in the study. There were 98,760 patients. 69% had more than one visit. 43% had over two visits. There were over 275,000 patient visits recorded. The therapists were trained and supervised by medical staff. They were to perform the SCIO therapy and analysis. They were to report any medical suspected or confirmed diagnosis. Therapists personnel are not to diagnose outside of the realm of their scope of practice. Then the study technician is to inquire on any disclosed observations during the test and on follow-ups report any measured changes.

Study Technicians
The study technicians were educated and supervised by medical officers. The study technicians were to execute the SCIO therapy and analysis. All were trained to the standards of the International Medical University of Natural Education. Therapists from all over the world including N. America, Europe, Africa, Australia, Asia, and S. America were enlisted to perform the study according to the Helsinki study ethics regulations.

Study Technicians
The study technicians were educated and supervised by medical officers. The study technicians were to execute the SCIO therapy and analysis. All were trained to the standards of the International Medical University of Natural Education.

Methods and Materials
SCIO Device

The SCIO is an evoked potential Universal Electro-Physiological Medical device that measures how a person reacts to items. It is designed to measure reactions for allergy, homeopathy, nutrition, sarcodes, nosodes, vitamins, minerals, enzymes and many more items. Biofeedback is used for pre-diagnostic work and or therapy.

The QXCI software will allow the unconscious of the patient to guide to repair electrical and vibrational aberrations in your body. For complete functional details and pictures, see appendix.

Subspace Software
The SCIO is an evoked potential Universal Electro-Physiological Medical device that measures how a person reacts to items. It is designed to measure reactions for allergy, homeopathy, nutrition, sarcodes, nosodes, vitamins, minerals, enzymes and many more items. Biofeedback is used for pre-diagnostic work and or therapy.

The QXCI software will allow the unconscious of the patient to guide to repair electrical and vibrational aberrations in your body. For complete functional details and pictures, see appendix.

SOC Index
The SCIO interview opens with a behavioral medicine interview. This is called the SOC Index. Named after the work of Samuel Hahneman the father of homeopathy, he said that the body heals itself with it’s innate knowledge. But the patient can suppress or obstruct the healing process with some behavior. Hahneman said that the worst way to interfere with the healing natural process was allopathy or synthetic drugs. Theses upset the natural healing process by unnatural intervention and regulation disturbance. Other ways to Suppress or Obstruct the cure are smoking, mercury amalgams, stress, lack of water, exercise and many others. This behavioral survey then gives an index of SOC.

The scores relate to the risk of Suppression and Obstruction to the natural cure. The higher the scores the more the Suppression and or Obstruction. The scores of 100 or lower are ideal. A copy of the SOC index questions appear in the appendix.
A. placebo group, B. subspace group, and C. attached harness group. Cross placebo group manipulation was used to further evaluate the effect.

**Important Questions:** these are the key questions of the study

1. Define Diseases or Patient Concerns
2. Percentage of Improvement in Symptoms
3. Percentage of Improvement in Feeling Better
4. Percentage of Improvement Measured
5. Percentage of Improvement in Stress Reduction
6. Percentage of Improvement in SOC Behavior
7. What Measured+How (relevant measures to the patient’s health situation)
8. If Patient worsened please describe in detail involving SOC_

After the patient visit is was complete the data was e-mailed to the Ethics Committee or IRB for storage and then analysis. This maneuver minimized the risk of data loss or tampering. Case studies were reported separately in the disease analysis.

**Medical Details**

In these disorders there is an increased production of the alpha and gamma globulins from the hypertrophied lymph tissue (A), with an associated decrease in plasma albumin. Occasionally, the beta globulins are increased. Diagnosis is established by cultures of the appropriate body fluids, serologic tests, and skin tests.

Viral, protozoal, and parasitic disease may produce a similar picture, but the increase in globulin may be more marked, particularly in infectious hepatitis, kala_azar, typhus, and lymphogranuloma venereum.

**Summary of Laboratory Findings:**

- Albumin: Decreased or normal
- Alpha globulins: Increased
- Gamma globulins: Increased

Culture of body fluid or secretion is the best way to diagnose bacterial infection. (see Microbiology)

A good microscope and a little practice can go a long way.

Electroacupuncture is also a good way to diagnose bacterial infection.

(see New Biology of DR. William Nelson)

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**IMMUNITY TO BACTERIAL INFECTION**

1. **Humoral factors**
   - (i) Secretory IgA antibodies may prevent attachment of bacteria to host cells
   - (ii) Antibodies to M proteins and capsules promote opsonization and phagocytosis by
     a. Fc receptors
     b. Complement activation and C3b adherence
   - (iii) Complement activation via the alternate pathway by endotoxin (LPS)
   - (iv) Neutralising antibodies (anti_toxins) directed against bacterial exotoxins, e.g. antibodies against the erythrogenic exotoxin of Streptococcus pyogenes which gives rise to the skin changes of scarlet fever
   - (v) Antibodies directed against bacterial stress proteins
   - (vi) Serum lysozyme

2. **Cellular factors**
   - (i) Phagocytosis by polymorphs and macrophages
   - (ii) Killing mechanisms
     These are enhanced by
     a. activation by bacterial products such as LPS, formylmethionyl_leucyl_phenylaianine and related peptides
     b. activation by cytokines such as interferon_y and TNF
   - (iii) T_lymphocyte response directed at bacterial stress proteins

**Results**

Before we review the direct disease improvement profiles, we need to review the overall results. The first most basic of question in the results is the basic feedback of the generic patient conditions.

1. Percentage of Improvement in Symptoms
2. Percentage of Improvement in Feeling Better
3. Percentage of Improvement Measured
4. Percentage of Improvement in Stress Reduction
5. Percentage of Improvement in SOC Behavior

The SOC index gives us great insight to this study. Each disease has a different cut off where the ability of the SCIO to help was compromised. As a general index scores of 200 + where much less
successful.

This groups significant SOC cut off was 100.

The Large scale study had over 98,000 patients and 275,000 patient visits we have direct evidence of the safety and efficacy. A placebo group was used for the large scale test to help validate the results.

This disease group total number of patients was 10,203

Subspace Treatment 3,922 patients, 6,281 SCIO Harness Patients

Overall Assessment

A. Subspace Treatment 4,659 patient visits

There were 9 cases of patients who reported a negative Improvement.

None of these cases reported any major difficulty.

There were

- 34 cases reporting no improvement of Symptoms, .007% of Subgroup
- 53 cases reporting no improvement in feeling better, .012% of Subgroup
- 3 cases reporting no improvement in stress reduction, .001% of Subgroup
- 23%— Percentage of Improvement in Symptoms
- 26%— Percentage of Improvement in Feeling Better
- 13%— Percentage of Improvement Measured
- 43%— Percentage of Improvement in Stress Reduction
- 3 %— Percentage of Improvement in SOC Behavior

B. SCIO Harness Treatment 14,553 patient visits

There were 5 cases of patients who reported a negative Improvement.

None of these cases reported any major difficulty.

There were

- 21 cases reporting no improvement of Symptoms, .001% of Subgroup
- 15 cases reporting no improvement in feeling better, .001% of Subgroup
- 21 cases reporting no improvement in stress reduction, .001% of Subgroup
- 45%— Percentage of Improvement in Symptoms
- 68%— Percentage of Improvement in Feeling Better

- 56%— Percentage of Improvement Measured
- 78%— Percentage of Improvement in Stress Reduction
- 21%— Percentage of Improvement in SOC Behavior

Dramatic and significant improvements in symptoms and in measured reduction in the infections.

This points to the value of the Neuro-Immuno link that biofeedback works with, and also validation of the electrocution Zap principle used by the SCIO.

CASE STUDY REPORT CONDENSATION

"I purchased the devise 2 years ago after a LONG journey with Lyme disease. I use it on my self and feel it is an extremely important tool that assists me in balancing my stressors and helps me prevent "recurring/relapses" that are often part of the "picture" of Lyme disease.

My brother was then diagnoses with Barrett’s esophagus (he had severe digestive troubles for many years) and developed severe arthrits. He rarely goes to physicians. He is retired military and was finally persuaded to go to the VA hospital. Fortunately he was well treated (physically and emotionally) and returned home.

He then came to see me and experienced EPFX. He is quite “skeptical” of my holistic health focus but agreed none the less (he has been impressed in the improvement in my health during the past 2 years). He was amazed. He said he couldn’t not remember the last time he felt "this good" and returned home to "rave" about it to his wife.

A year later he was "scoped" to monitor the Barrett’s esophagus, and was told there was no sign of it. In addition to EPFX, he made dietary changes and utilized nutritional supplements. The EPFX helped him see the value in addressing all aspects of health, mind, body, spirit and emotion that I doubt he would have otherwise even considered.

I have VERY strong feelings about being an American and having FREEDOM of choice. My brother served in the Army for 23 years and “fought” for this right. WE MUST include the EPFX and holistic health as our right to choose the health care that is in alignment with each individual’s belief system.

Thanks you, Dr. Nelson, for all you do and have done to provide this "state of the art" devise and wisdom to us.

Mississippi, U.S.A.”

“Treated everyone in my family (using harnesses) when they showed first signs of viruses (particularly bad winter for viruses in my area) an without exception, all viruses minimized or gone by the next day. These were, however, not diagnosed by a physician.

Treated a 16 year old girl with stress fractures in her feet. She is a ballet dancer and bulimia showed in her matrix. This was unknown to her parents. Low minerals were also showing. After one treatment she had 60% less pain – this is after months of traditional approaches.

Treated a 40 year old female with whiplash following a car accident. Previous approaches were
As soon as my husband realized I was critical, he hooked me up to the harness, to the ankle and I had gone into anaphylactic shock. Of bed so that he could clean me up as well as the bed. For about the 8th time since I became ill, unable to pass. I went home, passed out, and woke up to find my husband trying to drag me out chanced to pull behind a truck which was spewing diesel exhaust. For about five minutes, we were person, but I had another accident this past June 29. Driving with a friend in an open car, we Prior to purchasing the SCIO, my doctor had told me she could not help me and according to chemical can be life-threatening. Life since in a virtual “bubble”, isolated much of the time because any exposure to almost any department came in and confirmed that we were all working in a “sick building”. However, by the time I found the problem, I was so sick I would never work again and have spent most of my nineties I almost lost my life at a public school where my immune system became completely compromised from exposure to three kinds of toxic molds and to other man-made chemicals inside the building where I taught. Two of my colleagues died. Because I had always had such great health, I was the person who finally discovered what the problem was. The state health BACK PAIN, SLEEP, ALLERGIES, RARE POISON GAS, KIDNEY STONES, FOOD POISON "This biofeedback with the EPFX has really helped my back a lot. It has helped my allergies and pointed out foods I can eat and those I should stay away from. In addition, it has helped me sleep. During the care we found a rare gas which poisoned me many years ago called Greenland’s gas. It was so impressive that the instrument helped to find the specific name of this gas. The gas had caused a severe case of pneumonia and my body was still stressed by that episode. I was cleared from that problem. On one occasion, we found kidney stones in my system. The next day I passed (11) kidney stones plus gravel safely. Two days ago I had food poisoning and today we found 6 types of bacteria including the food poisoning bacteria.”

"First, I purchased it for personal reasons, never dreaming I’d be helping anyone else. In the mid-nineties I almost lost my life at a public school where my immune system became completely compromised from exposure to three kinds of toxic molds and to other man-made chemicals inside the building where I taught. Two of my colleagues died. Because I had always had such great health, I was the person who finally discovered what the problem was. The state health department came in and confirmed that we were all working in a “sick building”. However, by the time I found the problem, I was so sick I would never work again and have spent most of my life since in a virtual “bubble”, isolated much of the time because any exposure to almost any chemical can be life-threatening. Prior to purchasing the SCIO, my doctor had told me she could not help me and according to recent lab results, I probably did not have much longer to live. Eight months later, I was a new person, but I had another accident this past June 29. Driving with a friend in an open car, we chanced to pull behind a truck which was spewing diesel exhaust. For about five minutes, we were unable to pass. I went home, passed out, and woke up to find my husband trying to drag me out of bed so that he could clean me up as well as the bed. For about the 8th time since I became ill, I had gone into anaphylactic shock. As soon as my husband realized I was critical, he hooked me up to the harness, to the ankle and wrist straps and put the human/animal pad on top of me and began to treat me. I am convinced that one action saved my life. Even though I had experienced another diesel exposure, resulting in a diagnosis of “chemically induced pneumonia” years prior, this experience last June was the worst. If it had not been for SCIO treatments I think I would have died.

Now, eight months later, I have managed to do away with all the pneumonia bacterium but one, and that is the worst. It is Klebsiella pneumonia. My doctor failed to diagnose the problem and thought I had developed COPD. I asked him to do a sputum test to CONFIRM WHAT I SAW ON THE SCIO. Sure enough, the sputum test identified the Klebsiella bacterium. I looked up Rife frequencies for that and intend to use those on the Therapy screen, along with other SCIO treatments and natural homeopathics, herbs and essential oils. My body is so reactive that I truly cannot take antibiotics, but I have made great progress again through regular SCIO treatments, plus attention to diet and natural means.

I helped my niece who developed ovarian cancer. She was so sick from her chemotherapy treatments that she could not get out of bed. With SCIO balancing, she sailed through her last series of treatments and even went back to work! I referred her to an MD in her area, one who is also a biofeedback specialist. My niece decided to purchase the SCIO for herself and plans to study and help others because of the positive results she experienced. I have helped my diabetic brother. I helped a contractor who had worked doing remodeling for me. He had become a good friend.

City Unknown”

USUAL or CUSTOMARY TREATMENT PLAN

BAC, Imune Stm., Lymph Liq., Liver Liq., Bacterinum 500x, 1000x, Thymus Liq., Euphrasis 1x if stubborn , follow repertorization of symptoms

NOSODAL TREATMENT, Infection

1. Homeopathic nosodes are a collection of disease causing or disease tissue of the body. We find that when prepared homeopathically this can help reverse diseases.
2. Homeopathic treatment of diseases such as lupus, leukemia, yellow fever, scarlet fever, cholera, typhus, miscellaneous bacteria and fungus have been shown clinically and experimentally successful.
3. Bacterial nosodes have been shown to increase the mobility and motility factors of white blood cells (ref. Blood Motility Study).
4. Fungal nosodes have been shown to increase the speed and mobility factors of the white blood cells towards fungus.
5. Virus nosodes have been shown clinically to help with flu infections and to help increase antibodies to measles. (bacteria, fungus, viral studies) (measles) (nosodal work)
6. *BAC, *FNG, and *VIR has been shown to clinically stimulate the immune system (white blood cell) towards bacteria, fungus, and virus, respectively.
**Endobiosis or Blood Parasitism - The Teaching of Prof. G. Enderlein**

The history of man is the history of man's errors.

A modern historian has said it, and at no time was this phrase more applicable than for the current situation in our medicine.

After 60 years of impeccable research work, Prof. G. Enderlein has brought forth proof for the CAUSAL origin of all our chronic diseases, including cancer, as well as their successful counteraction. Prof. Enderlein was a biologist, zoologist, and chief curator of the Zoological Museum in Berlin. He was born 1872 in Leipzig as the son of a family of teachers. He studied the Natural Sciences, especially zoology, and concluded his studies with Promotion 'Summa cum laude.' He was the production manager of the firm SANUM, and founded his own biological Institute where he developed unique preparations out of mould fungi. He died 1968 in Hamburg, at the age of 96, bodily weakened but in full possession of his mental faculties.

Before we enter upon a deeper study of Prof. Enderlein's teaching, we must first provide a brief, historic, overview, in order to make a correct understanding possible. In all of medical history, there has never been a more vigorous and passionate scientific controversy than the one between two French scientists: ANTOINE BECHAMP and LOUIS PASTEUR.

BECHAMP (chemist-biologist and Prof. of Pharmacy-1816/1908) claimed that all animal and plant cells contained tiny granules (he called them „Microzymas”), which do not perish at the death of the organism, which are the cause of fermentation, and from which also other microorganisms would arise. These „Microzymas”, he said, were in each living body, human, animal, and plants; they are nonperishing and indestructible, and they form the transition between non-living and living matter. Under specific, or pathogenic influences, he said, the „Microzymas” could develop themselves into bacteria with putrefactive and fermentative properties. Thus, he said, the diseases had their origin from WITHIN the body. With this, pleomorphism had been discovered and the foundation was laid from which additional research would have developed, if PASTEUR (microbiologist - 1822/1895) had not interrupted this important work. He claimed that all microbes, regardless of their type and species, are unchangeable; that each type would produce only one specific disease; that bacteria and fungi would never arise from spontaneous generation; and that blood and tissues are sterile in healthy conditions. Diseases, he said, have their origin from bacteria that attack the body from the OUTSIDE, and stem from preexisting bacteria.

A third scientist joined in the debate:

CLAUDE BERNARD (physiologist - 1813/1878) corrected: ‘No, Gentlemen, the microbe is nothing. The milieu is everything.’

As is known, PASTEUR was very eloquent and effective. Thus he succeeded in convincing the scientific community that he had, indeed, supplied the essential experiments and examination results. Although at that time there were many authors who concerned themselves with the controversy of these two scientists, even accusing Pasteur of using BECHAMP’S research in his own works without giving proper credit, the name of PASTEUR is known all over the world, and

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that of BECHAMP is hardly remembered.

Although PASTEUR is quoted to have said on his deathbed: ‘Bernard was correct. The microbe is nothing, the milieu is everything’, thus giving indirectly acknowledgement of BECHAMP - it was too late... Medical thinking had already further developed on the basis of Pasteur’s, oversimplification of microbiology, and our current knowledge is based on those partial truths.

Prof. ENDERLEIN entered deeply into BECHAMP’s earlier work and developed it further.

When PASTEUR was 73 and BECHAMP 79, ENDERLEIN was 23. In BECHAMP’s year of death (1908), he was 36 years old; thus he was his contemporary for many long years.

ENDERLEIN HAD ALWAYS CAREFULLY RESPECTED THE RIGHTS OF PRIORITY, as is notable in all of his writings.

ENDERLEIN’S discovery occurred in the year 1916. On the occasion of his work on typhus, he observed in the blood-darkfield tiniest moving beings, which entered into union with higher organized bacteria. Their copulations product became instantly invisible. He surmised sexual processes, through which came about, not higher forms (as in embryonal development), but lower forms that were invisible to the eye in the light microscope. These vigorously moving elements had flagella. He named them SPERMITS. Moreover, he had already recognized that in the blood of mammals there was always found a symbiont of plant origin. This organism occurred in diverse forms which, among other things, provided essential functions (thrombocytes) in cases of blood coagulation. Thus, all life corresponded to a ‘gigantic primary symbiosis’, because without the possibility of blood coagulation, there could be no vertebrates.

Healthy life would have to be an Eusymbiosis; correspondingly, diseases would correspond to a disturbed symbiosis. The discovery of the ‘Spermits’, naturally, could not solve all problems, but once the foundation of living forms had been touched, the cycle of microbes in its manifold forms became very quickly describable by Enderlein. He wrote and published over 500 works, most of them about pleomorphism and symbiosis. He spent many years with precise research, examining living blood with a darkfield microscope. This made it possible for him to publish his chief work, BAKTERIEN-CYCLOGENIE (Publisher W. de Gruyter & Co. Berlin, 1925). In it he presented arguments and proofs for pleomorphism, which have to this date remained undefeated.

ENDERLEIN shows in this work that in the ‘Struggle for Survival’, all species strive after balance and multiplication, rather the contrary is the case: killing and eating is limited to the unavoidable processes, through which came about, not higher forms (as in embryonal development), but lower forms that were invisible to the eye in the light microscope. These vigorously moving elements had flagella. He named them SPERMITS. Moreover, he had already recognized that in the blood of mammals there was always found a symbiont of plant origin. This organism occurred in diverse forms which, among other things, provided essential functions (thrombocytes) in cases of blood coagulation. Thus, all life corresponded to a ‘gigantic primary symbiosis’, because without the possibility of blood coagulation, there could be no vertebrates.

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ENDERLEIN shows in this work that in the ‘Struggle for Survival’, all species strive after balance among themselves; that, by no means, the goal is the elimination of other species through unlimited multiplication, rather the contrary is the case: killing and eating is limited to the unavoidable measure for the maintenance of the species. We allow ENDERLEIN to express himself directly:

‘In 1914, after the First World War began, the medical department of the I.A.K. Allgemeine Krankenhaus (General Hospital) in Stettin, was unable to find a bacteriologist. Therefore, I personally offered my services as a volunteer, in the interest of the soldiers .... Yes, they were very favorably disposed toward me by giving me the rank and income of a staff-doctor although I was in the category of a ‘general biologist.’ Well, I immediately used these means for the installation of another laboratory in my private house hold, besides the laboratory in the administrative district of the I.A.K. which was located southwest of Stettin. Then I tried to work at home late at night in order to continue and establish my studies. From my home in northeastern Stettin I rode my bicycle to work in the south western part of Stettin right through town very early in the morning. In this way, I had finished a complete revision of the developmental processes within the bacteria, along with 330 illustrations, within the span of two years. Because the W. de Gruyter Co. Publishers in Berlin had no intention of printing it during the war, I- seeing its immense significance - began publishing it August 19, 1916, in the ‘Sitzungsberichten der Gesellschaft na turforschender Freunde, Berlin, Year 1915’ in the form of a comprehensive abstract with the totality of terms. The identical article became reprinted in the book ‘AKMON’, ‘Bausteine zur Vollgesundheit und Akmosophie.’ Booklet I, 1955 (pps. 68-70). Then also the main work appeared. In that were also large portions of the cycles of the primary symbiont: ‘Mucor racemosus Fresen’ described and illustrated in the ‘Bakterien-Cyclogenie’.

As early as 1915, I had isolated the endobiont (in the form of the bacterial phases occurring in the blood) out of the blood, and named its pure culture by the valid name ‘Mucor racemosus Fresen’, not calling it by the long antiquated name of ‘Leptotrichia buccalis’ (Robin 1879). On the basis of this pure culture, which I cultivated further for decades, (which I had introduced as early as 1915 to an assembly of doctors near Stettin, as well as to the Director, Dr. med. Gehrcke) - the entire series of the development stages had already been laid down in the illustrations prepared for the ‘Bakterien-Cyclogenie’ whereby, for the first time, a document absolutely contrary to the general opinion regarding the ‘sterility’ of the blood, has been brought forth and fixedated ...’


And further. In ‘Immunobiologica’ Vol. I, pamphlet; 1950: ‘On the Disease Complex of Endobiosis’: ‘In contrast to the manifold occasional illnesses of man, which are caused by specific pathogens, such as e.g. Micrococcus catarrhalis, Bacillus influenza, Treponema spviliticum, Pneumococcus, etc. man has two parasitic microbes, which must be understood as the steady companions of his species. More than that, these two parasites stand in a determined relationship to each other; they complement and replace each other mutually. First we want to name the Tubercle Bacillus, which has undergone a series of developmental stages within the human body, on which one or the other of the tuberculous diseases are based upon. In its primitive stage - profitt and chordrit - it is already transferred displaceantely into the embryo ... ‘

‘In a biologically and functonally inseparable relationship to Koch’s bacillus, there is an even more dangerous parasite in the human species, which I have named the ENDOBIONT. For millions of years past, the entire mammal family became infected with a fungus - ‘Mucor racemosus Fresen’. ... Thus, the Endobiont is constantly present in the animal body and neither can, nor should it ever be removed; BUT THE ENTIRE FOCAL ATTACK AND, WITH IT, ALSO THE RELEVANT CLINICAL FORM OF DISEASE, DEPENDS ON THE CONDITIONS OF ITS DEVELOPMENT. This fungal parasite unfolds all stages of its total development within the body and can attack all tissues and organs, more or less. Exactly this fact is what makes the Endobiont so dangerous for the human being, and precisely this circumstance has the consequence of the entirely unusual manifoldness of the focal attack. According to statements of A. Leischke, already the ovum and sperm are attacked, in contrast to Tuberculosis, where an infection has to occur...’

The Endobiont usually occurs as carcinoma, and the Koch Bacillus as lung tuberculosis. But both parasites may also occur in most of the other diseases, especially in their chordrit stage. Therefore,
the treatment must take this into account, because the diagnostic delineation of the attack is not possible, particularly in the primitive stage. Thus, a combination treatment is a necessity from the beginning. The hydrogen-ion-concentration (pH) of the blood gets shifted through the Endobiont, whereby it must be especially emphasized that the Endobiont expressly devours protein. It is understandable that these facts create ever enlarging preconditions for the endlessly ongoing development of the Endobiont.

A. LESCHKE made a significant discovery, and proved, that the ferments of the turtle-bacillus (Sclerothrix antituberculosis Enderlein = Utilin ‘5’, was further developed into todays remedy out of Mycobacterium phlei) are able to absorb and, thereby, neutralize the ferments of the Endobiont. Thereby, the shifted pH gets restored. This fact forms the unavoidable precondition for every successful treatment, both antimicrobiontically as also specifically.

In summary, we can say that the researches of Prof. Enderlein have revealed:

1. The cell is not the smallest living unit, but the colloid is (Colloids are particles of a size under 0.2 pm, which means, they remain below visibility under the lightmicroscope, but they lie distinctly above the molecular measurements of low-molecular substances. In image-comparison: 100.000 of them laid side-by-side measure 1 mm).

2. The proof that bacteria have a nucleus or nucleic equivalent (Myth).

This understanding has been seriously opposed by the teaching opinion of his day, however, barely 20 years later it became confirmed (Harmsen) through the development of the phase-contrast and the electron microscope.

3. Proof of the sexual propagation of bacteria Enderlein clearly differentiates in all microbes between sexual and nonsexual propagation; between the formation of larger microbial forms (increase in valence) of the PROBAENOGENY, and pure increase by numbers of AUXANOGENY.

The nonsexual propagation occurs by sprouting and splitting, the sexual is connected with a copulation or nucleic fusion. The sexual propagation has been confirmed by the researches of Nobel-Price recipient J. LEDERBERG and ELTAUMG, USA, and Prof. W. Hayes, Edingburg - 40 years later! - although, without mentioning the research of ENDERLEIN.

In their multiplication, the primary tiny lumps begin to differentiate themselves and they appear in unimaginable numbers of diverse forms. Of these, certain ones - especially those getting abundant supplies of animal protein - increase in size, get a small spherical form, with a nucleus residing at the least, its primitive stages in his own cells and body fluids his whole life long. They are even in the sperm and the ovum. Within the developmental series of the Endobiont, the lower phases (Protitt, Prottt, and Chondrit) are apathogenic and are therapeutically usable. All other higher forms can facilitate or produce diseases, whereby they penetrate, not only the blood cells, but also-beginning from various stages-the cells of tissues to influence them degeneratively.

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4. The scientific proof and foundation of pleomorphism in microbes.

This teaching reveals that a certain type of microbes can occur in diverse forms and developmental stages under precisely established conditions, beginning from the smallest grades of ultramicroscopic magnitudes up to the large, multinucleic, highly-developed stages of bacteria and fungi. Enderlein started from the observation that, the further one goes back in the development - from the highly developed and complicated to the simple - the more plastic and changeful get the life substances and the faster do the life forms merge into each other, due to the changes in the living conditions. Enderlein was able to proof this after long and tedious research works. The result of his labor is the work titled ‘Bakterien-Cyclogenie’ (from the greek ‘kyklos’ = circle and ‘genos’ = birth, origin). It shows the developmental course of bacteria from the tiniest virus stage of the protein-like tiny lump, up to the sta - ge of bacillli, and from here, to the microscopic fungal stage. All this has been confirmed through research done in more recent years, especially by the Tuberculosis-Research-Institute in Borstel, by KOLBEL, G. DOMAGK, UVEDA, H. HARMSEN and G. MEINECKE. As usual, many of these reports failed to refer to ENDERLEIN.

5. The proof that there is no sterile, germfree blood.

Enderlein says that in the serum of all people and warm-blooded animals there are living microorganisms. He called them ENDOBIONTS (from the Greek ‘endon’ = internal and ‘bios’ = life).

40 years later, other authors named them ‘Microsomes’ or ‘Chondriosomes’ without consideration of ENDERLEIN’s priority, and they claimed that they are endogenous elements of the blood. But, the research by ENDERLEIN revealed that there is a developmental form of the Endobiont which is of a plant nature. He called it THECIT, and recognized them to be entirely identical with the Thrombocytes. That occurred already in 1939 (cf. Microbiological Congress, USA) and afterwards came the news from the USA that the ferments of the Thrombocytes have been found to be entirely different from those of human cells. In most recent times, it has also become confirmed that English researchers have certified plant enzymes on Thrombocytes, although - again - without mentioning ENDERLEIN’s research.

The human being lives in symbiosis with a plant microorganism, the ENDOBIONT.

There is no human being who has not diaplacentally acquired this Endobiont and has not hosted, at the least, its primitive stages in his own cells and body fluids his whole life long. They are even in the sperm and the ovum. Within the developmental series of the Endobiont, the lower phases (Protitt, Prottt, and Chondrit) are apathogenic and are therapeutically usable. All other higher forms can facilitate or produce diseases, whereby they penetrate, not only the blood cells, but also-beginning from various stages-the cells of tissues to influence them degeneratively.

During further development, there suddenly arises in the midst of this assembly a formation, in which the nuclei are grouped in an irregular fashion, either across or obliquely to the length-axis, or else parallel to it. It will later on become the ancestors ‘Mother’ of the large group of microscopic fungi, in which a central canal with solid walls forms inside the body. There masses of primary nuclei gather, in order to become expelled as primitive forms for the purpose of propagation. Thereby, the large cycle the Cyclogeny - from the primary stage of the tiny protein lump, via the bacterial and bacilli stages, up to the fungal stage with its enormous productivity of primitive forms, is ended. But what is it that makes these tiny primary clumps of protein into such rabid beasts that makes them turn against the cells of its hosting organism (the human being or mammal)! Our civilization causes or facilitates the upward development through artificial fertilizers, preservatives, coloring substances, air pollution, etc., but in the very first place stands our false nutrition, which literally ‘fattens’ the Endobiont by its high-content in protein and sugar.
So ENDERLEIN says: ... ‘As soon as the balance of the blood serum between mineral salts (bases, alkali) and acids has become disturbed toward the acidic side through long -continued, antibiological nutrition, a limitless proliferation of this Endobiont begins, and simultaneously, the rise of these tiny primary lumps which now become parasites, via an extensive, developmental series. The higher this Endobiont rises within its developmental series, the more its harmlessness increases, and the higher rises the over-acidification of the blood, both standing in a mutually aggravating interrelation.’

According to ENDERLEIN, all chronic diseases are based on this development into higher forms of the Endobiont. The higher valenced forms are parasites. They will then develop their own metabolism that poisons the human bodyfluid (predominantly by high-grade rise in lactic acid production). He says:

‘Basically, there is not a multitude of diseases, but only one constitutional disease, namely the constant over-acidification of the blood, which disturbs the central regulation of the human body, disorienting it, all of which is mainly the result of an inverted way of living and eating’... ‘It is chiefly the current, civilized food with its abundance of animal protein, especially meat, fish, and eggs, which causes this over-acidification, on the one hand, and masts the parasites, on the other hand. Therefore, a lacto-vegetarian food is the biologically and nutritional-physiologically correct nutrition, because it lowers the over-acidification by its abundance of bases and alkaline salts. If it is used from childhood on, or better yet, used by the mother before the marriage - it can prevent and heal all diseases.’

By the upward development of the endobiont, a decrease of the regulatory equilibrium in the interchanging relationship with the vegetative centers in the diencephalon occurs, which leads to a failure in its shape and forming function.

6. Disease means symbiotic disturbance. Whether by simple expansion or increase in numbers, the Endobiont spreads in the body of man and warm-blooded animals and its higher developmental forms congest the circulatory system (prethrombosis, thrombus of the capillaries, etc.)

7. The symbiotic disturbance
It is recognized in the darkfield by the ABSENCE OF CERTAIN GROWTH FORMS OF THE ENDOBIONT (Diokothecits). As bioregulators, these maintain the balance in the symbiosis. Simultaneously, diverse pathogenic cellular elements occur.

8. Symbiotic balance
The healing of diseases is possible only when the body regains the lost regulators. That is, the primitiveapathogenic developmental forms (Chondrits) which metabolize the higher, parasitary developmental forms through copulation with them, so that they subsequently leave the body through the organs of elimination (kidney, intestine, lung, skin).

9. The questions regarding health concern living processes exclusively
Therefore, they can be resolved only through the BIOLOGICAL science.

In conclusion, a brief report on:

The mutually positive performances of the two associates in the primary symbiosis: MAN and ENDOBIONT

I. Associate: MUCOR RACEMOSUS FRESEN, the ENDOBIONT:

1. Formation of DIOEKOTHECITS for the establishment of regulators in two directions, both with extreme mobility.

1.1. SPERMITS for the degradation of its own higher and pathogenic developmental phases.

1.2. Formation of MICROSYMPROTITS for the degradation of higher and pathogenic phases.

2. Formation of COLLOIDAL THECITS for the production of REGULATORS in one direction.

2.1. Extremely mobile MICROSYMPROTITS for the degradation of higher and pathogenic phases.

3. Formation of THROMBOCYTES.

3.1. For the production of SPERMITS acc. to Enderlein, 1916; valid name, with priority over: BAKTERIOPHAGES, a synonymous term that has been brought in by d’Hérelle in 1917, which is invalid and fundamentally wrong. Both relate to the characteristic memory within the identical microbe.

3.1.1. Through formation from outside by their tie-offs 3.1.2. Through sympalstism (agglutination) of the same into larger, and up to very large, heaps, which subsequently expell their entire contents inwardly, along with the micromych (primary nuclei), from which subsequently SPERMITS will arise; 3.2. for the quickly required closing up of wounds. 4. Through the start of SYSTATOGENY of degradation products by COLLOIDS, which stand ready for the building of PSEUDOCRYSSTALS, in case of over nutrition, especially with meat and fish. These living colloids from sputum and also from the blood travel - on the slide-smears - within a few minutes, toward the outside parameter of the slide (up to about 5 cm distance) and gradually construct themselves into the forms of limitless pseudocrystals right before your eyes. This process can very easily be observed.

5. Through the formation of SCLEROSYMPROTITTHECITS the fattening of the primary symbiont into sclerotic pseudocrystals is accomplished, that is, kept from developing into higher, pathogenic phases by overeating. However, the sclerotic pseudocrystals cause extremely serious congestive diseases. These sclerotic formations (scirrhotic forms) occur in two different ways:

5.1. Directly to

5.2. Through the formation of SCLEROTHETICITS, which develop further into SCLEROSYMPROTITTHECITS and, finally, their total content re-shapes into PSEUDOCRYSSTAL FORMATIONS out of colloidal and up to chondrit material, thereby developing into SCLEROSYMPROTITSYMPLASTS.

II. THE HUMAN BEING, HOMO SAPIENS...I What else but a constant decline could be expected as the consequence to centuries of disrespecting the natural biological laws (by a diet that masts the Endobionts, by breakfast decadence, preservatives - culture, and so on). Instinct and Intuition have been lost. Moreover, due to Mercury-Silver amalgam fillings, the chances for a cancerous disease have increased dramatically.
6. All the phantasies built up around MUTATION or even ATAVISM and PROGONISM - such as the one by Max Westenhofer (1907) and Friedrich Faber, 'Cancer, Its Law and Its Secret' (E. Wancura Publishers, Vienna/Stuttgart 1954) are without any biological basis and thus, eliminate themselves simply by the fact that we are here not dealing with protozoa in the endobiont, but that it presents a distinct BACTERIUM-FUNGUS-ORGANISM. It is grotesque to ascribe to the vertebrates an Atavism back to primitive plants! Such things are nowadays covered by the term ‘SCIENCE’!

7. LIVER and GALLBLADDER DAMAGES are the sure consequence of mercury or other heavy metals only occasionally caused by cancer, although mercury often enough can lead to cancer in the end.

8. The CAUSAL ORIGIN for the FIRST MANIFESTATION has not yet become known, due to the extreme smallness of LIVING COLLOID (or better, the PROTITIT PHASE), with a diameter of 0.01 pm (= 1/100000 mm).

9. Friedrich FABER, 'Cancer and Its Law' (E. Wancura Publishers, Vienna/Stuttgart, 1984) says on page 297: ‘Humanity will be relieved of cancer only when the pioneering, decisive world-changes from the mecanocentric to the BIOCENTRIC AGE will actually come about.’ Well, the ‘BACTERIENCYCLOGENIE’ has been pioneered and AKMON I and II actually already present the solution for the ‘BIOCENTRIC AGE’.

As clearly presented above, the ENDOBIONT has applied itself CONSCIOUSLY for hundreds of years to services in favour of the mutual symbiotic association. They were exclusively subordinated to the goal of maximally eliminating the formation of higher and highest - and simultaneously also, pathogenic up to highest pathogenic - phases in most diversified directions.

Yet, the mutual associate in the primary symbiosis, the ‘HUMAN BEING’, is to this very day without the smallest inkling of this association!

Aside from constantly supplying nourishment, the side of the service from THE HUMAN BEING REMAINS A HUGE ZERO, corresponding to such an exorbitant anaphysm toward the laws of nature. All that is left is his pocketing the final bill from biological natural laws!

III. OR DOES ANYONE BELIEVE THAT LOGICAL THINKING IS A PROFESSIONAL DISTURBANCE’

Already Pythagoras (582-507, B.C.) has uttered: ‘that the gods are innocent concerning the sufferings, and that all diseases and pains of the body are the products of extravagances.’ According to: Jamblichos from Chalkis (3rd Cent A.C. in ‘The Life of Pythagoras.’

In conclusion, I wish to call attention to the following. The ISOThERAPY, its remedies being produced by SANUMKEHLBECK of Germany in consistent continuation of the teaching and direct inheritance from Prof. ENDERLEIN.

Darkfield Seminar, The Growth Forms of Microbes in the Blood

One cannot fight an unknown enemy! Because a victory over the primary enemy of the human species is only then possible when one knows this enemy, the fundamental need is to specify, first of all, the comparative-morphological and biological developmental foundations, which facilitate our approach in getting to know this entirely unknown and unrecognized primary enemy of the human species. According to Professor Enderlein, pleomorphistically considered, all microbes partake in a natural developmental cycle, that begins with the PRIMITIVE PHASE, which is microscopically invisible or visible with difficulty; this changes into the BACTERIAL PHASE, and finally culminates in the FUNGAL PHASE. This final form of its developmental ascent is its CULMINATION: The fungal culmination can also be replaced by a YEAST-CULMINATION.

The bacterial stages, however, occurring in between the two extreme phases, are universal and natural for most bacteria and fungi.

Fundamentally, the microbial forms consist in their primitive stages of a homogenous, unorganized, unmoving, yet living protein in colloidal form, which neither includes lipoids nor nucleic acid derivatives as reserves, nor does it deposit them around itself. These purely colloidal proteins have a trillion (that is a 1 with 18 zeros) diversities, which are capable of combining themselves with all elements, even with heavy metals, as well as with nearly all other chemical compounds, right in the human body. From this result huge astronomical numbers of colloidal compounds, which we can grasp at first only in summarized groups.

The most primitive developmental form of every microbe is the PROTIT, the primary biological unit which is pure colloid, with a diameter of 0.01 gm. This is the primary living form in general, on no account a cell (see: ’Das Ende der Herrschaft der Zelle als letzte biologische Einheit’: G. Enderlein, im Archiv für Entwicklungs geschichte der Bakterien. Vol. I H. 2, July 1933, pps. 171-179, 5 DRAWINGS).

A nationalization (unification) of a number of protits can occur in three ways:

1. A one-dimensional arrangement. This results in a shorter or longer thread, the FILUM; its diameter is that of the prott, namely 0.01 Im. However, it can constantly increase in thickness, after its formation.

2. A two-dimensional arrangement of the protits, like in the spermit-heads (= one prott/one filum).

3. A three-dimensional arrangement, namely into more or less tiny granules, the SYM PROTIT.
### Bacterial forms of the endobionts.

**Development of a mychit (primary cell) out of symprotit, he latter develops into a mych (primary nucleus).**

**Sclerotrix tuberculosis**

Koch 1882, primary cells (mychits) and transitions into free symprotit. Nonacid-fast form. Enlargement 10 000 : 1.

Further development of the primary cell consists of the increase of valence of the nucleus into a larger, multi-valenced nucleus, that is the cell, the CYSTIT, which has the valence of two or more nuclei.

The THECIT, which is also spherical, comes about from the splitting of the nucleus into two or several nuclei. Actually, the THECIT represents the primary form of the bacterial cell, in which the natural primary type of the sphere has not yet evolved into a bactorial rod through the stretching factor. It can grow into a very large sphere, whereby the nuclei can form themselves smaller or larger. However, they also occur in tiniest forms, near the size of the colloid, and as such, they fill the THECIT in large masses within the primary cell plasma.

The fission of the primary cell underlies the identical quantum-biological factors as the processes in the development of the primitive phases. The FILUM is suddenly projected in the identical way. In the small space of the spherical primary cell, it is confronted with a considerable space problem so that only a very short thread results (the FILLELUM). The new symprott is formed by the tiny button growing at its end. It swells up to the same size as the mothermych.

With this, the spherical bacterial cell begins to stretch and it gradually ties itself up in the middle, whereby the FILLELUM gets absorbed. Subsequently, the fission of the tied-up two-nucleic cell into two bacterial spheres with one nucleus, each, occurs. An additional construction phase of two mychits into a short rod is the bacterial form of double rods, then fourfold-rods, then eightfold rods, the six tenfold-rods and then thirtytwofold-rods. The final product of this developmental sequence is the BACTERIAL TUBE, the ASCIT. In all these developmental forms, the mych (primary nucleus) lie one behind the other (catactact), while they are usually arranged in an irregular way towards the sides (synchrons) in more progressed forms.

The primary nuclei (mych) of the bacteria remain in the majority of the bacteria placed at the wall, the mych usually protrudes only minimally from the bacterial contour, rarely noticeably far. Only in the synchrons, which are the very thick bacterial forms in which the primary nuclei (mych) are present also in the interior, and even more, in the mycelia of fungi, they are not placed at the wall.

Reserve substances, which form a more or less thick layer, may be deposited around the primary nucleus. These mych with their covering of reserve substances completely correspond physiologically to the fatty substances in higher organisms. To the very largest percentage of cases, these reserve materials consist of LIPOIDS and also of NUCLEIC ACID DERIVATIVES. Both of them have a strong capacity for taking on coloring agents, in contrast to the extremely low capacity of the bacterial nucleus to be colored (stained).

The mych (nucleus) is only visible in the spherical bacterium (mychit) when it occurs without reserve materials (atrophic), which usually happens only in strongly parasitary varieties, as with for example CHOLERA BACILLI or MEMINGOCOCCI, which require no nutritional reserves.

THE PRIMARY NUCLEUS AND ITS FISSIONDUM-BELL SHAPE IS, RATHER, THE PRIMITIVE FORM OF THE CHROMOSOMES.

Among the growth forms of bacteria belong also the partial formations, which get tied off at the end of a bacterial thread; they may also be spherical propagation forms, that is mychit which are named GONIDIA in this function, or also parts of double - rods or fourfold rods for reproductive and spreading purposes. The permanent spores (SPORITS) also belong into this group, in which a portion of the nucleic protein gets stored in dry form. These dry forms of sporits can tolerate temperatures up to 310 degrees celsius (according to Prof. Zettnow, Robert Koch Institute), or higher yet (according to Dr. Spengler), without their germinating capacity being damaged. While there is a sharply-comparative morphologic cut between the primitive phases and the bacterial phases, there is no such occurrence between synchrons of bacteria and synchrons of fungi; they smoothly merge into one another.

The spore formation of fungi is of a manifold nature. One portion is a combination of an inner germ out of the spore, in the form of a fungal thread which GERMINATES IN NEUTRAL AND ACIDIC MILIEU, and also of primitive phases distributed over the surface, which germinate in ALKALINE MILIEU, and also of primitive phases distributed over the surface, which germinate in ALKALINE MILIEU, and also of primitive phases distributed over the surface, which germinate in ALKALINE MILIEU.
MILIEU. This signifies nothing other than a securing of progeny under all possible conditions of nature.

THE DEVELOPMENTAL PROCESSES IN THE BLOOD

Our blood preparations show the just described formations and reformations in abundance. When we take a closer look at the individual sections of the slides in the diverse microscopes, and compare their forms with one another, it should become quite clear to us that there is a constant microbiological process taking place in our body fluids, the action of which must be immensely important for the condition of the human being.

Now we are facing the developmental processes in these microbes which are so decisive for the human health. They may occur singly, or also in manifold ways.

1. THE MULTIPLYING DEVELOPMENT (AUXANOGENY)
2. THE CONSTRUCTIVE DEVELOPMENT (PROBAENOGENY)
3. THE NUCLEIC CONSTRUCTION (DYNAMOGENY)
4. THE TENDENCY FOR CHANGING QUALITY (PHYSIOGENY)
5. BLOCKING (MOCHLOSIS) AND UNBLOCKING (MOCHLOLYSIS)
6. THE SEXUAL PROPAGATION

1. THE MULTIPLYING DEVELOPMENT (AUXANOGENY)

The multiplying development represents that development, which is commonly known and recognized. A bacterial sphere (mychit), a short rod (dymichit), or a long rod grows to its double size and then splits into two individuals of half the size. This process of development, however, is possible only WHEN THE CULTURE IS SUPPLIED WITH AN EVER NEW NUTRITIVE MEDIUM. This is also the reason for the very old demand in microbiology to work only with entirely fresh cultures.

2. THE CONSTRUCTIVE DEVELOPMENT (PROBAENOGENY)

It is based on the quantum-biological sudden leaps. Each microorganism forms from within itself ferments in each of its developmental phases, namely the SPECIFIC ORGANIC ACIDS, which prepare for this advancing development. The dependency of probaenogeny upon the pH of the nutritive medium or the milieu is a FUNDAMENTAL LAW (Enderlein calls it Anartatic Fundamental Law). The changes of the hydrogen-ion-concentration, from the strongly alkaline high of the pH-value towards the ever decreasing pH-value of the acid side, constitute the fundamentals of this law for giving the ever higher advancing microorganism the capacity for use of all its lower developmental forms to serve its advancement into ever newly developing organic form. That is, it demonstrates the summary of the ASCENDING developmental tendency with the ever more DESCENDING pH-value. The fact that this is due to internal valences, is proven in that ONE CAN NEVER FORCE AN ADVANCEMENT through increasing the acidity of the culture medium, even by supplying that specific acid which has been found out to be the one formed by the organism itself for this advance. In contrast, a DESCENDING DEVELOPMENTAL TENDENCY to the lowest forms of the total cycle can be reached extremely easily. By adding a little bacterial material or parts of fungal mycelia to a hanging drop of 5 % sodium carbonate, that is, a strongly alkaline medium with a high pH-value, one can immediately observe the formation of the primitive stages, namely in the CHONDRT STAGE. That is, one can easily verify the advancing steps ‘PRIMITIVE PHASE -
Bacterium broteus Hauser:

Fig. 1 = basit stage, fig. 2 = phytt stage, fig. 3 = rhabdit stage, fig. 4 = linit stage, fig. 5 = catatact ascit stage, fig. 6 = synascit stage (terminating into ascit on the top).

The primitive stage CHONDRIT can be seen most frequently, the constant change between FILUM and PRIMITIVE GRANULE (Symprotit). Depending upon the size of this tiny primitive granule (between 0.02 pm and 1 pm), very diverse valences may occur at this stage, all of which can present diversified needs and properties. The BASIT-stage consists of an ongoing change between individual sphere and a very short twofold rod. Among these are the cocci forms of bacteria, which already present primary cells. Subsequently, the stages conclude with PHYTIT, RHABDIT, LINIT, ASCIT AND MICASCIT, depending on the change between twofold, fourfold, eightfold, sixteenfold, thirtytwofold or longer rods. Because of their manifoldness, all these stages are collectively named SYNASCIT, which is their collective-stage name.

Leptotrichia buccalis (Robin 1879), formation of syntact ascits (= synascits), Enlargement 20 000:1

Sclerotrix tuberculosis Koch 1882, Mychomitosis inside Mychit. Nonacid-fast form, Enlargement 10 000:1

Sclerotrix tuberculosis Koch 1882, copulation of 2 mychits in basit-stage, nonacid-fast form, enlargement 10 000:1

The PATHOGENITY of each microbial parasite lies nearly always in ONE developmental stage, the VIRUS STAGE, rarely in two or even more stages. This VIRUS STAGE may occur at any place within the total developmental course. ONLY IN THE PRIMARY PARASITES OF HUMAN BEINGS, WHICH ARE CONSTANTLY PRESENT IN THE HUMAN BODY - THAT IS, THEY ARE NOT ABSENT AT ANY POINT OF THE TOTAL HUMAN DEVELOPMENT - IS THE TOTALITY OF THE MANY HUNDREDS OF DEVELOPMENTAL PHASES MORE OR LESS PATHOGENIC. This pathogenity rises with the level of the developmental stages and their dynamovalues. THE ONLY EXCEPTIONS ARE THE VERY FIRST PRIMITIVE STAGES, named the PROTIT and the CHONDRITS which are of lowest valences. They are entirely nonvirulent and they play a REGULATORY role toward the higher and pathogenic stages by decomposing these through copulatory processes. In that sense, these stages are termed REGULATORS.

Let it be added, that beside each of these numerous developmental possibilities, also additional stages may simultaneously occur, especially all low stages. EACH OF THESE STAGES IS CAPABLE OF PRODUCING THE CHONDRIT-STAGE OUT OF ITSELF. But, the microorganism is also capable of presenting the higher stages by leaps, in conformity with the quantum-biological and atom-physical nature of the primitive processes of these lowest of living organisms.

3. THE NUCLEIC CONSTRUCTION (DYNAMOGENY)

If the microorganism finds no possibility and no preconditions for reaching a higher stage, then it accumulates its living energies in one or more, or even all of its nuclei (mych) so that, when other living conditions prevail, it will be immediately in the position to leap suddenly into the construction of a complex organism for which it already has the necessary materials. This behavior lends to the microorganism a certain independence from the other developmental processes.

4. THE TENDENCY TO CHANGE THE QUALITY (PHYSIOGENY)

It also needs not always run parallel to the other developmental processes. For example, consider the change between acidproof and non-acidproof qualities of the tubercle bacillus.

5. BLOCKING (MOCHLOSIS) AND UNBLOCKING (MOCHLOLYSIS)

This concept also is very important.

Examples: In higher organisms, the changes between the individual developmental stages are connected with more or less penetratingly big differences in the necessities for life. A variety of the bark-beetle, living in a decomposing tree, has identical necessities for life of the egg, the four larval stages, the pupa and the bug himself. This is entirely different for a mosquito: the egg, the larva and the pupa live in water, the mosquito in the air, and it is blood-sucking. These identical differences occur in the microorganisms in very much manifold numbers. There are bacteria, such as e.g. the diphteria bacillus which occurs both in the pure culture and also on the tonsil, simultaneously as spheres, short rods, long rods, club rods, cystit, thect, yes, even in yeast form. All these developmental stages have, therefore, the identical necessities of life; they are ISOBIOTIC. However, most bacteria are biologically oriented in a HETEROBIOTIC way, that is, the individual, cyclic, developmental stages may have diverse necessities. Their rise or descent will break down when these necessities find no satisfaction. This very frequently insurmountable appearing
A MOCHLOUSIS (or UNBLOCKING), that is the resolution of obstructions, can be reached through the effect of influences which favorably change the pH of the culture medium. Another aspect are the internal influences of the bacteria itself, namely the FERMENTS. We are here also partly dealing with spontaneous, quantumbiological changes. These factors are e.g. light, electricity, removal of oxygen, presence of special gases, toxins, salts in various concentrations, parasitism, chemicals, thermic changes, etc.

Particularly for our endobiont, the main factors which threaten our health are: cancerogenic substances, purely mechanical stresses, the lifestyle and the diet, which are CONDITIONAL factors for its rising development. The CAUSATIVE FACTOR IS THE ENDOBIONT HIMSELF. Together, these are the factors which bring about the consequences, namely, that the human being - as the host of this primary enemy - is attacked in increasing degree by rheumatism, circulatory disturbances, dropsy, stroke, diabetes, stomach ulcers, and finally also cancer.

Enderlein calls the summit of the microbial development THE CULMINATION. If the CULMINATION lies in the BASIT STAGE, then there are involved the species of micrococci, streptococci, diplococci, etc. If it lies in the CHONDRIT STAGE, then the microbe is the cause of a so-called VIRAL disease. Most of the CULMINATIONS exist in the fungal form, especially in the mould fungus forms as well as in the yeasts can present the CULMINATION, such as e.g. in diphtheria. For our primary enemy, the culmination is the fungus MUCOR RACEMOSUS FRESEN, with its bacterial phase LEPTOTRICHIA BUCCALIS (Robin 1879) (according to modern classification = PROPIONIBACTERIUM ACNES), which can always be found between the teeth and on the gums of human beings.

6. THE SEXUAL PROPAGATION

The spermits of the microbes are tiny swarmers that consist of a tiny symprotit head and a filum flagella, which enables it to copulate with all symprotits or mych of all the bacterial and fungal forms within the same cycle. The consequence of such propagation of bacterial and fungal-nucleic apparatus (mych) is naturally that the bacteria and fungi immediately become dissolved and they degrade. However, this is on no account identical to the damaging or destruction of the bacteria, as the bacterial researchers had assumed. They had believed that the bacteria were simply eaten up. Rather, we are dealing with THE TRANSFORMATION OF PATHOGENIC BACTERIA INTO THEIR NONPATHOGENIC PRIMITIVE PHASES WHICH, BEING UNINTERESTED IN A PARASITARY LIFESTYLE, IMMEDIATELY LEAVE THE HUMAN BODY. This elimination of the primary enemies in a peaceful, living manner from the body occurs by way of the epithelia, the bladder, the intestines, and the bronchies.

PRACTICAL EXAMPLES

If one observes the comparative-morphologic blood condition of a patient who has the FELTY syndrome (a special form of PCP with tumor of the spleen, leucopenia, anemia, and brownish pigmentation on uncovered body surfaces) - even if he still walks about in apparent health, one is amazed and fascinated over the manifoldness of the biological occurrences in his blood. One can see how numerous erythrocytes helpfully approach leucocytes and lymphocytes that are seriously attacked by symprotits of the endobiont; they crowd around diseased white blood cells.
SOME COMMENTS FOR MEMORY AID FOR THE BLOOD EXAMINATION

The CHONDRIT FORMS swarm very often freely around in any blood as ‘swarmers’, consisting of a symprotit head and a filum flagella. If they are found swimming freely in the blood serum, arranged in tiny trees, then we are dealing with a beginning endobiotic disease, especially rheumatism. However, the seriousness of the illness is visible from the valence, that is from the relative size of the symprotts. The significance of the dynamovalence of the symprotts can be seen from the following illustrations.

From the marginally situated symprotts on the erythrocytes - also - bacterial rods may form when there are higher dynamovalences, among which is cancer. The possibility for building other forms of the developmental cycle is, generally speaking, actually entirely unlimited.

The causes for stroke lie in the area of congestive processes in the developmental stages of the congestive agent (endobiont). Another possibility is the ‘SYMPLASTISM’, the drive toward symplast formation, which is inherent in all developmental phases of the bacteria within a certain physiological condition which, undoubtedly, arises from a tendency to wards a stronger alkalinity. In this symplast, all developmental forms get densely packed together and degrade in a massive copulation of the MYCH amongst each other, and they frequently end in a total agglutination of chondrits and protits.

An additional, fundamentally significant factor is the process of erythrocytic parasitism and the further development of the endobiont in this element of blood !!!

When we observe the blood of a patient with anemia, we note that the endobiont can develop itself further in the forms of: symprotts and their splitting dumb-bells, thecits, thrombocytes and bacterial rods, with more or fewer primary nuclei, depending on the formation of their size.

A very important point must be taken into account. The copulation processes in the chondrits brought into the human body are, in no case, singular occurrences. Rather, they continue to copulate ongoingly. That means, when congestions occur involving these degradation products and their deficient elimination, these metabolic products also copulate again and again, also amongst each other.

Therefore, if these metabolic products are not properly eliminated from the body, the valence of pathogenity continues to rise the longer this ongoing copulation continues. From this, it must be decisively seen that no lengthy pause may be allowed between a chondrit injection (e.g. MUCOKEHL) and the antichondritin injection (e.g. MUCOKEHL EXCRETION PRODUCT) except in cases with free ways of elimination of all degradation products. A correct combination of all these possibilities is, therefore, the basis for success for a good doctor.

Of special importance is the comment that the so-called dysbacteria of the intestines in cancer, Hodgkin and other diseases from the endobiont complex are in no way degenerative coli-bacteria, as is often stated, but those degradation products of the endobiont in their chondrit-stage which are moving along through the intestines are reconstructing themselves into the short rods of the Leptotrichia buccalis. Because this repeated infestation by highly pathogenic forms causes serious intestinal disturbances, especially obstipation, which represents a serious stress during the cancerous process - it is urgently advised to take care, AND immediately to take orally - best time, in the evening - one endobiont-chondritin-tablet (MUCOKEHL D5), or better a capsule (MUCOKEHL D4), which will cause a repeated degradation within a short time. Only after freeing the intestines from such dysbacteria would it make any sense at all to ingest again a full-value coli-bacterial strain in place of the one ruined through the dysbacteria in the intestines.

FURTHER COMMENTS

THE EFFECTS OF THE MICROBIOLOGICAL PROCESSES IN THE BLOOD
First of all, importance must be placed on the level of the developmental stage of the parasite. It is increasingly recognized that certain disease types are not produced just by one and the same parasite, but much more frequently by a whole series of agents, but in a very definite developmental stage of the causative factor. In SUCH CASES, THEREFORE, THE DEVELOPMENTAL STAGE OF THE PATHOGENIC PARASITES IS THE DETERMINING FACTOR!! For instance, it has become known that rheumatism is caused by the chondrit stage of several different organisms, thus, normally, the endobiotic rheumatism by the endobiont; but also by the tubercule bacillus in its chondrit stage, the so-called Poncet’s rheumatism; then, additionally, also the chondrit stage of the lues pathogen, of the gonococcus and a whole series of streptococci and micrococcis. THAT IS TO SAY, THE STAGE OF THE PARASITE IS THE DECISIVE. FACTOR.

The blood of every human being also contains in the condition of total health numerous elements of the developmental cycle of the endobiont; this constant infestation exists partly free in the serum, to a large part in the erythrocytes, and especially in the lymphocytes. Add to these the fibrin and, especially, the thrombocytes, the blood platelets, both of which have proven themselves to be elements of the cycle of this parasite.

Parallel to the disease symptoms, different forms in the cyclic process of the endobiont go through all three chief phases, which are present in all tissues and organs. Every single one of the multitude of endobiosis diseases is chronic, general illness of the entire human body. Among all these tissues, blood tissue is the most accessible to a critical examination.

The endobiont is a pronounced ROBBER OF PROTEIN. The only non-plant protein which can be taken in larger amounts, is the protein of the milk, and that in its acid form, such as cottage cheese and other forms of cheese. These lactic proteins have developed a special accomplishment in the course of endless time, namely the capacity for producing a specific protein synthesis, which does not give the endobiont an opportunity to feed on.

BIPOLARITY OF THE CHRONIC DISEASES

The one side of this bipolar construction acts alone through the FAULTY OPERATION of all physiologic processes and factors. This is the aggressive me thod of the tuberculosis bacillus and of the paratuberculosis agent in its primitive stages. The other side is represented by the CONGESTIVE METHOD of the endobiont. The endobiont has a congestive influence simply by its presence in every case, and this, in three diverse ways, namely, to begin with, by its primitive phases, later through its bacterial phases, and finally through its fungal phases. Thus, parallel to the rise in valences and the developmental phases, this also raises the pathogenity, simply by increase in its mere size.

METHOD OF THE BLOOD EXAMINATIONS

The many appearances of the chronic disease complex are due to the unlimited hundreds of developmental phases of their microbial agents. Not only do they attack all tissues and each individual cell, but they also express their extensive, primary appearance in every fully healthy human being, even in all body fluids of the entire organism. While the developmental form represents the ONTOGENY in all plants and animals, the organizational capacities within the primary organisms have potentized themselves into a fourfold possibility:

1. CYCLOGENY It represents a limitless potentized summary of a huge number of generation cycles in which each single appearance-form is ABLE TO REPRODUCE ITSELF INTO THE IDENTICAL FORM AS LONG AS AN IDENTICAL pH IS MAINTAINED. The colloids, being the primary construction material, form primitive nationalizations through lining up these primary factors, namely:
   a) one-dimensional, that is, arranged in threads (filum)
   b) two-dimensional, into finest, skin-like surfaces, which are found e.g. in the sphertl (bacteriophage) as swarmer-heads
   c) three-dimensional, namely into physiologic, often spherical symphts (primary nuclei)

Both the filum and the sympht alone are already able to unite themselves, namely, the first into the FILIT, a constant change of fila sizes x:2x, the latter into the stage SYMPROTIT, a constant change of symphts in spatial sizes of x:2x. For all remaining developmental phases, only these quoted building blocks are used for the higher and highest nationalizations. That is, they are not only used for the construction of the bacterial phases but for all phases of the fungal forms.

2. ONTOGENY

This means, the developmental form of all plants and animals which, however, here in the primary organisms, depends on the ANARTATIC PRINCIPLE (Enderlein). This means: for the nationalization of comparative-morphologic units into higher and highest developmental phases, the specific acids PRODUCED by each individual microorganism are the CAUSAL reason for the changes of the milieu in the pH, and that is tending to the ACIDIC side. In other words: the RISING steps of the total cyclogeny are accompanied by and dependent on the PROPORTINATELY DESCENDING pH. (This has been incorrectly assessed as ‘pollution’ by bacteriologists.)

3. SYMPLAST

This is not a stage but an extremely diversified form of conglomeration. Developmental forms of every type within the total cycle have the tendency of agglutinating into more or less formless spheres (SYMPLASTISM). In this process, all individual phases fall apart into the primitive phase CHONDRT, the constant change between filum and sympht. Thus, THE SYMPLAST IS AN EXTREMELY PRIMITIVE FORM OF THE MERGING OF ALL FORMS FOR INCREASED SEXUAL COPULATION.

4. SYSTATOGENY

When they occur in concentrated form, the last units of living substance (the colloids, directly connecting with the atoms, are capable of structuring themselves through an inherent drive towards arrangement. Even through minor impacts are they driven into the so-called SCAREFORMS, which represent forms of dry protein, looking like crystals and being highly reflective. In this form, they survive temperatures of over 310 degrees celsius without loss of germinating capacity. These pseudo-crystals are often found in the blood of chronically ill patients. They need not necessarily come from the same provenance because colloids of different species can unite with one another.

They mostly stem from the endobiont, of which we know from experience that it feels obliged in all cases of infectious diseases and epidemics to spread itself especially broadly so as to intensify the pathogenity of the infectious disease into its worst form.
FORM FOR BLOOD EXAMINATIONS

1. PROTIT VEIL

The presence of a veil drawn over the entire visual field indicates the tendency to freely release the final units (colloids) in masses and, correspondingly, a very high alkalinity, a very high pH. When the native preparation shows this condition, then it is useless to supply injections into such a phase because they must remain ineffective. No formation of spermits will occur in this condition, and already present spermits get immediately degraded into colloids through the injection material. Therefore, all too strongly alkaline blood conditions must be optimally adjusted toward the normal degree for the spermit. For this reason, a preceding application of FORMIC ACID D6 (D5/D4) or L(+)lactic acid potency accord (SANUVIS), BEFORE the chondritin injection, has been practiced for years. THE OPTIMUM PH FOR THE SPERMIT IS ON THE LEVEL OF 7.3.

Blood elements: Collection directly after blood-vital examination fig. 1 erythrocyte, fig. 2-9 8 examples of dioekothecit of the size of ery’s till the size of a thrombocyte; with thick & hairlike fila which are extraordinarily short and equal and extend longitudinally. fig. 10 A thrombocyte for comparison. fig. 11-16 6 colloid-thecits from the same blood in different sizes.

A few blood-elements, approximately 4 hours after blood was obtained. fig. 17 and 18 degrading dioekothecits. fig. 19 and 20 erythrocytes with 1 chondrit thread each with larger symprotits and very short fila parts. fig. 21 and 22 two erythrocytes with cataact ascits. fig. 23 erythrocyte with synascite vital.

2. COLLOID THECIT + DIOEKOTHECIT

a) COLLOID-THECIT: A developmental phase of the primary parasite. It is spherical and may show any size up to the size of erythrocytes. It consists of a heap of pure colloids arranged as a sphere, which is surrounded by an extremely fine spherical shell, and shows no sort of appendices, such as even the shortest form of fila. Only in the darkfield alone is it even noticeable. Even this takes great practice in working with microscopes. In cases of cancer and other serious endobiotic diseases, the tiniest and up to larger conglomerates of colloidal masses occur as shadowy, extremely delicate, grey spheres or spherical formations. They do not contain traces of one or more nuclei, thus representing ‘cells without any type of nucleus.’ In the darkfield they show a weak glimmering. Normal chondrit- thecits with abundant primary nuclei begin with minimal nuclei, which occasionally can fill up the thecits rather densely. The final function of the colloid-thecit is the formation of large numbers of free colloids through tearing of the extremely delicate covering membrane.

b) The DIOEKOTHECIT is similar. It is filled with the absolute tiniest primary nuclei, the ‘micromych.’ That enables it to release conspicuously densely protruding, very short and fine fila through its extremely thin spherical enveloping membrane. Their size lies between the size of a thrombocyte up to the size of an erythrocyte. We are dealing here with nothing other than a gigantic thrombocyte, which does not contain the typical 3-7 mych but many hundreds of such mych. The final function of the DIOEKOTHECITS is the formation of spermits, through the tearing of the extremely delicate enveloping membrane. Both these formations are indicators of defensive capabilities. This DIOEKOTHECIT is not seldom found in the blood, but generally only in +/-small numbers. The genesis of these parasitic blood-elements of the endobiont stems from the erythrocytes, that is, these giant thrombocyte-type developmental forms from the cycle of the primary parasite are expelled out of the erythrocyte. Accordingly, the erythrocytes have a lumpy, pseudocrystalline appearance because they have been damaged very much through the attack of the primary parasite.

3. FILIT PHASE

It can be observed only in the darkfield. It is the first of the primitive phases which occurs through the change in fila according to the formula x:2x. Because the x shows very great differences in the lengths, the filit-phase comprises very large numbers of individual phases.

4. SYMPROTIT PHASE

One can tell by the diverse sizes of ‘free symprotits which are present, whether one is dealing with a pure developmental stage. Namely, in that case, the formula is also x:2x, which means the presence of identical spheres plus other ones of twice their size. When several sphere-phases are found side-byside, they will be indicated by a larger number of varieties in size, which is the more common condition.

5. MACROSYPYROTITS

These represent exceptionally large spheres of purely nucleic protein. They can be found free, or connected with the filum, or in the elements of tissues and cells of the host. In connection with the filum, the fila are, then, usually very mobile.
6. SPOROID SYMPROTITS

In the viewfield of the microscope, these appear as smaller or larger, luminous spheres, representing symprotits that contain protein substance in dry condition. Also, these already have all properties of the sclerotic developmental forms of the parasite and can survive heat of 310 degree C. They may occur either in the erythrocytes, the leucocytes, or simply by themselves (free).

7. SPERMITS

This phase develops out of the filum by growing of a symprotit-head on one of the two endings of the filum. We are here dealing with the integration of two different developmental phases, in which the filum takes on a flagella function. The presence of spermits in the blood-sample is always a sign for defensive capabilities against the higher, pathogenic phases of the endobiont. The spermit is nothing but a readiness to meet an alarming situation.

(Illustration not possible because of the minute size and mobility!)

8. FREE CHONDRTS

The chondrit stage begins with that sphere of the developmental growth of the endobiont, in which only the low-valenced phases have full apathogenicity and all higher phases reach pathogenicity to an ever rising degree. Not only the enlargement of the symprotits (that means, their valence) of the fila causes the rising lively mobility of fila but also the denser arrangement of even tiny symprotits along the length of the fila.

9. COLLOID SYMPLASTS

These are conglomerations of colloidAecits (cells without a nucleus). Only in the ongoing course of these conglomerations do the symprotits, and also especially the sporoid symprotits arise within these symplasts. They are a strong hindrance factor in proper blood circulation.

Large round vesicle, apparently formed out agglomerations of thrombocyte. Within the spherical envelope short bacterial rods are tightly packed together.

Worm-like, big colloid-symplast with numerous bundles of the filitstage (6 erts for comparison).

Big edging colloid-thecit with filit bundles and 7 golden, glaring, sclerotic pseudocristals (which can be silver-white).

10. MYCHITS (bacterial spheres)

The presence of reserve substances around the bacterial nucleus is of great importance for the mychits. To the most part, they consist of lipoids and nucleic acid derivatives. According to the absence or presence of these nutrients, the mychits can be classified: a) atrophic, b) miotrophic, and c) pliotrophic cells.

Bacterial forms of the endobionts. Development of a mychit (primary cell) out of symprotit, the latter develops into a mych (primary nucleus).

Scleratrix tuberculosis Koch 1882, primary cells (mychits) and transitions into free symprotit, nonacid-fast form, enlargement 10 000 :1.
Fig. A Mychits (2) dimychits (3) as well as tiny simprotits (1)

Fig. B Some bacterial forms with four dimychits (1), 8 didimychits (2+3) Sa. = synascit with 6 trophosoms and 1 trophosomellum.

11. THROMBOCYTES, MICROTHROMBOCYTES

All thrombocytes entirely belong into the cycle of the primary parasite (endobiont) of the human being. They arrange themselves freely into the extremely manifold areas of the THECITS. In lymphatic leukemia, Hodgkin, etc. the tendency may arise for all parasitic elements to degrade into the tiniest cells with uncommonly tiny nuclei, so that all cells, and particularly the leucocytes, get densely stuffed full with the tiniest microthrombocytes. The essential factor in thrombocytes and microthrombocytes is THE NUMBER OF NUCLEI which is between THREE AND EIGHT primary nuclei. All the larger ones are better classified among the thecits or - if they reach bacterial form, which is frequently the case - among the catatact ascits and the synascits.

Fig. Erythrocyte with serial ejection of thrombocytes. One sporoid symprotit remaining in the erythrocyte. (Hodgkin patient).

Three thrombocytes in process of leaving an erythrocyte each. Patient with anemia.

Seven different thrombocytes, only the first of which is normal.

12. THECITS

This very frequently occurring developmental form represents the primitive, primary form of all bacteria in the original sphere-shape, having more or less primary nuclei. The mych (nuclei) may be developed in the very tiniest form, up to extraordinarily large nuclei. From this form, all bacterial rods have emerged phylogenetically through differentiation.
• Erythrocyte, completely degraded, with 2 pedicle free exited thecits.
• Erythrocyte with symprotits and thecit of the end of a filum each.

Isolated enlarged thecit.

Patient with anemia

Colloid thecit, very strongly light-refractory like a glass tense.

Erythrocyte with exiting fila, at their ends symprotits or more or less enlarged cystits.

Erythrocyte with end symprotits which have already developed into thecits in the form of thrombocytes.

13. BACTERIAL RODS + ASCITS
The presence of bacterial forms with catatact arrangement of primary nuclei in the blood-samples IS ALWAYS A SUSPICIOUS SIGN. If they occur more frequently, ALONGSIDE OF OTHER SIGNS, then they are a sure documentation for either the presence of cancer, harmless or malignant tumors, or a serious chronic disease. They usually develop in the blood from the so-called ‘marginal corpuscles’ (symprotits) of erythrocytes. Reaching a certain length, they free themselves, whereby they flexibly search around with their front ends (like ‘tiny worms’). The diverse lengths of these rods indicate their association with particular developmental stages (phytit, rhabdit, linit, ascit).

14. SYNASCTS
The formation of syntact rods (with their nuclei arranged in all directions is a sign of further, rising development and therefore also documents rising pathogenicity.

Erythrocyte from a patient with stomachca. With 2 exuding bacterial rods of the endobiont. Enlargement: 3000 : 1
15. ANISOCYTOSIS
Diversities in the size of erythrocytes due to the pathogenic effects of the endobiont.

16. POIKILOCYTOSIS+ ERYTHROCITIC-DEBRIS
This comprises the manifold changes in the form of erythrocytes through the pathogenic influences of the primary parasite. One of the most frequently occurring deformations of erythrocytes is portrayed by a more or less ELONGATED, PEAKLIKE PROTRUSION of the erythrocytes which represent the transformation into a bacterial rod of the endobiont. This bacterial rod belongs to the phase of LEPTOTRICHIA BUCCALIS, which must be classified as the bacterial phase of the fungus Mucor racemosus Fresen. THE RELATIVELY SMALL FRACTIONS OF THE ERYTHROCYTES ARE ABLE TO REGENERATE. Poikilocytosis is characteristic for anemia.

17. DEGREE OF INFESTATION OF THE ERYTHROCYTES
This represents a very diversified matter, which must be directly experienced.

18. VALENCE OF THE INFESTATION OF THE ERYTHROCYTES
This refers to the VOLUME-ENLARGEMENTS of each parasitic form which can be found in the erythrocytes. (Figures and photos after no. 19).

19. VACUOLES OF ERYTHROCYTES
These are a sign of stronger, degenerative factors of a parasitic nature.

<table>
<thead>
<tr>
<th>Erythrocytes with different valences:</th>
<th>From patient with metabolic disturbances and swelling of the liver.</th>
<th>From patient with cancer.</th>
<th>Erythrocyte from cancer case. Live blood picture. Especially high valence endobiont infestation</th>
</tr>
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<td></td>
</tr>
</tbody>
</table>
20. DENDROID DEGRADATION OF ERYTHROCYTES

This tree-shaped or rope-like shaped parasitic growth form belongs among the ‘fibrin’ which schoolmedicine interpretes as blood coagulation. However, these processes BELONG TO THE RARITIES in erythrocytes. Still, their presence is, likewise, a documentation of cancer, EVEN WHEN THEY ARE ABSENT IN LEUCOCYTES.

Erythrocyte with chondrit-net (fibrin) in particularly fine net work; including 5 sporoid symprotits. The rather exhausted erythrocyte also contains 3 sporoid symprotits. (patient with lung cancer)

21. SCLEROTIC CHANGES IN THE ERYTHROCYTES

These are special manifestations that are particularly found in erythrocytes. Thus, THE TOTAL CONTENT OF THE ERYTHROCYTE may degrade into a large number of sclerotic CHUNKY AND CRYSTALLINE DRY PROTEIN PARTICLES.

Native blood examination. The four erythrocytes in the condition, that the dioeokothectite leave them in ripe condition. The condition of these erythrocytes is a little bit plaque-shaped.

2 erythrocytes from the same blood, live blood, apparently after the dioeokothectits left, strongly clodypseudocrystalline.

22. INFESTATION OF THE LEUCOCYTE NUCLEI

The parasitic infestation of leucocytes and lymphocytes is of extremely diversified nature. Essentially, the valences of the symprotits rise constantly; they can transform into a sporoid form, and finally reshape themselves into thrombocytes, which are able to fill up the entire nucleus. The rises can be designated as: very weak, weak, moderately strong, strong, and very strong. (Photos after no. 23)

23. INFESTATION OF THE LEUCOCYTE PLASMA

The parasitic elements are found in the cellular plasma as symprotits, sporoid symprotits, and as thrombocytes or microthrombocytes. All of these are able to grow out of the cell on flum pedicles, or remain in the plasma itself in all these elemental forms. In Hodgkin, and even more in lymphatic leukemia, a very large portion of all leucocytes or lymphocytes can degrade into symprotits within their nucleus and plasma and these can further develop thems elves into thrombocytes. They become fully filled up with these thrombocytes. Barely infested leucocytes may even proof themselves to be a rarity. THE SEVERITY OF THESE CASES CAN BE DETERMINED BY THESE MEANS.

24. DENDROID GRADATION OF LEUCOCYTES AND LYMPHOCYTES

The formation of tiny chondrit trees (= fibrin) of the parasite, can grow into ever stronger little trees, which grow far out of the cell and the nucleus. All this is valid for both leucocytes and lymphocytes. THE MANIFESTATIONS ARE CO-CHARACTERISTIC FOR CANCER, HODGKIN, ETC., BESIDES OTHER CRITERIA.
Lymphocyte, completely destroyed by the endobiont. The nucleus is filled with chondrit forms and the plasma is dissolved by the filum-system into a tree like fibrin-dendroid. The latter copulates with the parasites which are enclosed in the nearby erythrocytes.

25. DENDROID VACUOLES

These come about by the fusion of thick ropes of fibrincords of the parasite so that more or less densely arranged holes (vacuoles) remain only in the larger open areas. They may be smaller or larger in size. THEY ARE A DOCUMENT FOR STRONGEST DESTRUCTION OF LEUCOCYTES OR LYMPHOCYTES.

26. SCLEROTIC PARASITIC FORMATIONS

These are dry protein organizations based on the direct fusion of living colloids (systatogeny), as with the endobiont and other parasites. They are always in the human body and, especially, in the blood. An ongoing characteristic of all these sclerotic formations is their capacity of tolerating a temperature of 310 degrees Celsius without the smallest damage to their capacity for life. One can also see on them the appearance of tiny germinating foci on the inner angles of these formations and on the outer corners, showing low-valenced chondrits, respective chondrit-trees in the change between filum and symprotit. Described in brief, they are classified as follows: a) Sclerotic, usually very long filum-threads (often stretching over the entire visible field)

b) Very similar to these krypto-valent synascit threads

Aspergillus niger (van Tieghem), created from spores through addition of 5% soda solution, forms 2 fila with symprotits and thecits, which show a fairly amount of mych (primary nuclei); Enlargement approximately 5 000:1.
c) Pseudocrystals:
In the form of needles or angled plaques (chondrits arising from the corners)

Pseudocrystals of the endobiont with systatogenetic nature together with the poliomyelitis-parasite. These so compelled 'pseudocrystals' are a double-nature.

Blood examination from horse. Sclerotic forms (false crystal forms). Bornaic illness.

The wider synascit right is lamellar. Between also bigger sclerosymprotits.

The single parts of the sclerotic synascits (pseudocrystals) are put together catatactly, so they seemingly have a crystal needle appearance.

d) Sickle-shaped dry protein discs (drepanids). They arrange themselves most frequently in series, one behind the other, so that most microscopists rate them to be scratches in the slide.

Sclerosystate-drepanits from colloid material, sedimented by normal saline solution from a spore culture of Aspergillus niger van Tieghem.

The same from venous blood. Including 5 erythrocytes, which are partly penetrated by these forms *diabetes in 8 year old boy*.
Sclerosystate-drepanites sedimented by normal saline solution from Aspergillus niger van Tieghem spores.

e) Fly-shaped dry protein formations (pteroharps). They are predominantly found in higher endobioses.

<table>
<thead>
<tr>
<th>Pteroharps from vem puncture of a patient with intestinal bleeding and asthma.</th>
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f) Plumelike dry protein formations (ptylosclerits)

Plumed systases under addition of 5% soda solution. The same originating from a colloid-thecit.

g) Moss-like sclerotica (bryosclerits)

Aspergillus niger van Tieghem from spore material with normal saline solution. Moss-like sclerosystasis formation.

h) Fan-shaped sclerotica (rhipidosclerits)
Colloid masses concentrated in water (11/2 year old) through addition of 5% soda solution for lamella-like sclerotic formation.

Lamella-like sclerotic formation, developing by gradual drying out of the plumes of the Mucor racemosus Fresen colloids. This occurred beneath the cover slip. To the right 4 flat sclerotic structures, of which the lower most one at the left shows a pteroharp.

Bouillon culture of Aspergillus niger van Tiegem + ' part of soda solution 5 % systasis oc cours during the process of drying out cross like arrangement of systases out of living colloids. In the 1. illustration, top to the left one can recognize the clodlik systasis. In all the different 9 systases one sees the change from pteroharp to these cross-like structures, systases occurs during the slow drying out.

k) Sclerosymplasts. This group contains manifold formations of bubble-shaped, disc-shaped, to plane - shaped nature. They are keratinoses in pseudocrystal form ("Scare shapes").

Radial double sided sclerosymplast of the endobiont in heteroncrysis with the systatogenetic influences of the infectious agent of poliomyelitis.

i) Cross-shaped dry protein formations (chiosclerits).
27. DEROYSYNASCITS
A larger group of sclerotic formations. The derosynascit is a sclerotic formation that is more than double the size of an erythrocyte (in lymphatic leukemia, Hodgkin, warts).

Two still connected derosynascits from Hodgkin blood. These are characteristic for lymphatic leukemia, Hodgkin, can however be found occasionally in the secretion of hard verruca. Their building material consists mainly of sclerotic elements of the endobiont.

28. SYMPLASTS
These relate to the agglutination of all developmental phases of the ‘Virusphase, bacterial phase, fungal phase series.’ It is NOT a developmental stage but a creation due to the urge for unification (symplastism), which can be built up in the very shortest of times in a fraction of a second.

29. THE SYSTATOGENY
relates purely to the direct unification of living colloids amongst each other. It is pH-dependent. (Protit-veil, colloid-thecit). These final living units (colloids), with a diameter of about 0.01 μm, are able to be formed within the shortest time, a fraction of a second.

Because the pH -factors are of essential significance for the systatogenetic orchestration of nature, a few examples of nature’s play are discussed from this perspective, on the basis of the following illustrations. First of all, there is the phenomenon of the protit veil. This accumulation of colloids is entirely dependent on the highest possible pH-value. They develop into more or less limited formations representing that form of the developmental processes of microbes which are covered under the term COLLOID-THECIT. In the GIEMSA dyeing process, they take on luminous blue coloring.Forms, 4 or 6 - radialized, are quite frequent. In Fig. 12, nearly all developmental forms of the primitive phase and also of the THECIT, the ASCIT and - in the widened area below, on the right - the SYNASCIT are represented. In the synascits one can notice also numerous SPOROID SYMPROTITS that take over the role of the mych. At this point I wish to remind you that every developmental phase is capable of producing all the other developmental phases.

Patient with leukemia & Hodgkin. Outside the blood smear emigrated colloids, which arrange themselves in a systatogenetic manner to a colloid thecit. The resulting fissures are arranged in a straight line or 90 degree angle.

Another view of the same sample, the fissures are curved and embracing.
Radiate-filum-star, systatogenetically developed in patient with pulmonary cancer, however, belonging to the endobiont. Unstained. In the zone at the edges of the slide, free of blood and outside the smear. Purely of systatogenetic nature. The ovoid, sporoid sympotitis are especially shiny.

Systatogenetic construction complex from smear on non-provided halos of the slide emigrating colloids.

Annotations concerning the blood examination

The blood for this examination must be always drawn under the same conditions, best in the morning on an empty stomach, to avoid a confusion with the food-chylemia. It is in principle indifferent from which part of the body the blood is taken. It is only important that the blood appears spontaneously; it may not be squeezed out because then superimpositions and distortions of the very sensitive erythrocytes take place which forestall a perfect assessment respectively lead to false conclusions. A small drop of the patient’s blood is put on the slide and protected with a cover-glass so that it spreads out up to the edge of the slide without exerting any pressure on it.

Slide and cover-glass have to be free from dust and grease. Now and then they also have to be examined on production inclusions because those can resemble endogenous depositions. The cover-glass should not be too small, best is a size of 24 x 48 mm. This size has a sufficient weight to effect a well-proportioned distribution of the blood on the slide. At the same time it leaves enough free space to be able to observe a possible systatogeny. Moreover the immersion oil does not mix with the blood.

Advice: Take the drop of blood directly with the cover-glass and put this immediately on the slide. Take a drop of blood with the cover-glass at least two times. The assessment is then more reliable and if one smear gets lost due to awkwardness, you still have one smear in reserve. Moreover you can stain one smear ‘natively’ to compare it with the unstained smear.

To get the safest results, examination should take place immediately because the sensitive endobionts can change their form and valence very quickly by changes of the pH in the drop of blood, due to reasons of time.

If the preparation should be examined for a longer period, it is possible to seal it with liquid paraffin to avoid a drying up.

As Mucokehl injections cause a degradation of higher stages of the endobiont into lower ones, the blood appears slightly milky or cloudy after 24 hours. This cloudiness, the ‘protit veil’ consists of the smallest developmental stages of the endobiont. The protit veil disappears after a few days by elimination, especially by a good elimination therapy for example with homoeopathic remedies.
or with a diet or even better with an injection of the Mucokehl excretion serum. For this reason a repetition of the Mucokehl injection should be only effected after one week at the earliest.

Blood Examination Report No. ....................
pre- and surname:....................................... date of birth:....................................................
street:.................................. city: .......................
attending physician:.............................. diagnosis:..................... blood sample from:..................
preparation: ...........................................
coagulation: ........................................... serum:............................................................................
1. protit-veil:
2. colloid-thecit (cell without nucleus, native):
3. filit-phase (in darkfield):
4. symprott-phase:
5. macrosymprotits:
6. sporoid symprotts:
7. spermits in darkfield (synonym: bacteriophages):
8. free chondrits:
9. colloid-symplasts:
10. mychts (bacterial spheres):
11. thrombocytes, microthrombocytes:
12. thecits:
13. bacterial rods + ascits:
14. synascits:
15. anisocytosis:
16. poecilocytosis + erythrocytic debris:
17. strength of erythrocytic infestation:
18. valence of erythrocytic infestation:
19. vacuoles of erythrocytes:
20. dendroid degradation of erythrocytes:
21. sclerotic changes of erythrocytes:
22. infestation of leucocytic nuclei:
23. infestation of leucocytic plasma:
24. dendroid degradation of leucocytes:
25. dendroid-vasuoles:
26. sclerotic parasite formations:
27. derosynascits:
28. symplasts:
29. systatogenetic processes: Total Evaluation:
30. valence of the endobiont:
31. evaluation of the endobiosis:
32. remarks:

In connection with the blood examination form I wish to point out the following:
according to Prof. Enderlein
1. The PARACOLI BACTERIUM is not a degenerated coli-bacterium, but the phytit-stage of the endobiont.
2. The causal reason for the INFECTIOUSNESS of FILTRATES OF TUBERCULOUS MATERIALS is the chondrit-stage of the tubercle bacillus. This was noted as early as 1910 by FONTES (Brazil).
3. H. DOSTAL has also proven the easy transferability of the tubercle bacillus into the sphere (basitstage) by GROWING it in a liquid broth.
4. FIBRIN is by no means the sediment of a protein coagulation, but it is the chondrit-dendroid of the endobiont.
5. THROMBOCYTES are no blood organelles (platelets), but they are thecits of the endobiont.
6. MEGAKARIOCYTS (Metschnikow) are no normal cellular elements but they represent the lost ability of cellular and nucleic division due to massive infestation of these cells by the primitive phases of the endobiont. These cells have been forgotten over the eager attempts towards solving the focal problems in the sanitization of the ‘marrow of all bones.’
7. The NUCLEIC CHAIN CELL has reference to the just quoted, only, in this situation, the nucleus still has the capacity to divide, while the cell has lost it.
8. The MEGALOBLASTS of pernicious anemia do not represent erythrocytes which contain nuclei, but erythrocytes that contain a colony of endobiont chondrits, which get blown up to abnormal size by these (pseudo nucleus!).
9. NORMOBLASTS are erythrocytes stemming from the bone marrow do not have a nucleus but only a pseudo-nucleus, consisting of a colony of endobiont chondrits.
10. MACROCYTS. Abnormally enlarged erythrocytes without ‘pseudo-nuclei’, their enlargement being likewise due to a massive infestation with the chondrit-stage of the endobiont.

11. MARGINAL GRANULES of the erythrocytes are no organelles (Schilling) but they are symptotits of the endobiont.

12. MARGINAL RODS of the erythrocytes are no organelles (Schilling), but they are bacterial rods of the bacterial phase of the endobiont, which arose from the just quoted marginal granules. Later on, they free themselves and crawl upon the erythrocytes and leucocytes like caterpillars (wherefore Sanitary Counselor Dr. med. Otto Schmidt of Munich named them ‘worms’).

13. Also the ROUND and SPINDLE CELL SARCOMA contain no round and spindle cells of the host, but these are cross-sectioned (round) cells and obliquely cut (spindle) cells of mycelia of the endobiont.

14. RETICULOCYTES (Heilmeyer) are no erythrocytes with special organelles but erythrocytes infested with endobiont chondrittris in their interior.

15. PSEUDOPODIAL FORMATIONS IN THE LEUCOCYTE (dendrits) (according to BOND, London 1924: ‘The Leucocyte in Health and Disease’, H.K. Lewis & Co.) are, in fact, chondrit-dendroids of the endobiont. According to the doctrine, they are also described as ‘Fibrin’!

16. STERILITY OF THE HUMAN BLOOD (both in the sediment and in the filtrate). This illusion within the doctrin is, in fact, a massive infestation of all blood elements in all vertebrates, including the human being. Yes, even the healthiest human being is ridden with the primitive phases of the endobiont, and this infestation leads through genetic development to the bacterial and even to the fungal phases, when there are increasing disease conditions.

17. STERILITY OF THE BLOOD SERUM is an illusive doctrin concerning the contents also of the serum, which contains most diverse primitive phases of the endobiont.

18. DIAPEDEYSIS is the illusive doctrin concerning the process of a scrambling of all protein substances within the human body by the endobiont and its formation into ‘fibrin’, at the time of exitus (death).

19. THE CULMINATION OF THE FUNGAL FORM (Mucor racemosus Fresen) of the endobiont can easily be obtained through cultivation out of tumor cells. This has been proven as early as 1903 by Sanitary Counselor Dr. med. Otto Schmidt (Munich), as also subsequently, by myself.

20. The CALCIUM SHELLS OF TUBERCULOUS FOCI in the lungs are not protective processes by the own protection against the defensive capacity of the human blood.

Professor Pierre Delore, of the medical faculty in Lyon, who was well aware of the consequences of the ever increasingly catastrophic effects caused by disrespecting the natural laws and biology, summarizes his conviction in the following words:

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THE SCIENCE OF HEALTH IS PREDOMINANTLY A CONCERN OF BIOLOGY.

‘Consecutio sine quo non’: The health concerns of human beings comprise two gigantic FACTORIAL AREAS:

The one FACTORIAL AREA is the ATTACK FROM OUTSIDE through the environment in its largest context, among them also the parasites of the most diversified varieties; they INTENSIFY INTO INFECTIOUS DISEASES AND EPIDEMICS. In this area, surprisingly much has already been accomplished by medicine through hygiene and according to Virchow, even without having the faintest idea of the developmental microbiological processes. The reason for these processes lies in the biological fact that the parasitic microbes are mostly present only in a single developmental stage of the totality of end less varieties of developmental series.

The second FACTORIAL AREA, however, is a most internal matter of SYMBIOSIS between a HUMAN BEING - along with all other vertebrates - and ENDOBIONTS (Mucor racemosus Fresen/Aspergillus niger). In this symbiosis, existing over millions of years, especially the ENDOBIONT Mucor racemosus has been exceedingly successful in breeding many hundreds of developmental phases capable of nearly limitless manifoldness of pathogenicity, so that ONLY A COMPARATIVELY SMALL NUMBER OF NON PATHOGENIC STAGES REMAIN THAT DO NOT HAVE A TRACE OF PATHOGENICITY. Among these is, especially the last primary unit, the COLLOID (= PROTIIT PHASE), as well as the subsequent, low-valenced CHONDRIT STAGE and the final culmination, the spore-forming FUNGAL PHASE.

Before considering the isopathic foundation of treatments, I want to emphasize the following: In the RECOGNITION of the nature of this catastrophe, namely, the catastrophically RISING OPPOSITION of the human being towards this primary symbiosis having lasted hundreds of millions of years within the totality of all vertebrates - lies also the path for an aimed resolution of these processes. It is the isopathy. For this purpose, isopathy uses LIVING COLLOIDS in a fully united and simple way, which must be brought to the scene merely by the slightest modification of the pure mechanical differences of diverse disease symptoms belonging to a unique DISEASE COMPLEX. This disease complex is simply the ENDOBIOSIS, the addiction of CONGESTION.

The parasitic nature of the causative factor for all chronic diseases, including cancer, Hodgkin, etc., which has infested all vertebrates in their total development so extensively that no one single cell has remained untouched by this monster throughout the ages, is a unique occurrence, which is surpassed by yet another: the PRIMARY SYMBIOSIS with the limitless abundance of its hosts.

Here, I want to bring into remembrance that the human blood is considered sterile to this very day! The path of elimination for degradating products is in every healing process through the skin, the bladder, the intestines and the bronchies. To these belong also the interior foreskin of men and the vagina of women, that is, the epithelial organs and, in a form of apathogenic phases, with the SINGULAR EXCEPTION OF THE INTESTINES, in which degenerative phases are able to reconstruct themselves into short rod forms, which can have an extremely dangerous action of strong obstitution facilitating the further course of cancer; they are, by no means, degenerated coli-bacteria. Dr. med. Harvey BLANK (1956) assigned the name MONILIASIS for a new disease-complex that has become better known in more recent years and which is based on apathogenic endobionts that have been stimulated into pathogenic action through antibiotic drugs.
There is no doubt that what is termed an INFECTION is entirely out of the question in the unique occurrence of a primary symbiosis with a primary parasite in all chronic diseases including cancer. Of all the many hundreds of forms that the chronic disease complex manifests, there is no one that has ever been observed as caused by an infection. An infection with living material having the purely microbial nature of these primary parasites (endobionts) would only result in the meager remnants of the apathogenic phases (REGULATORS) attacking these foreign intruders; the extremely primitive phases of the spermoids would copulate with marginal primary nuclei (mych) of the primary parasite and dissolve these into the chondritic stage of primitive valence.

Upon clear contemplation, not only the cancer problem but the entire pathology, as taught by schoolmedicine, have become unsustainable. In any case, it is extremely revealing of the insight that Prof. Sauerbruch, in allowing a series of cancer patients to be treated isopathically in his hospital at the Charite and who, subsequently, in the closing years of his life again and again had pointed out that: 'IF ENDERLEIN IS CORRECT, THEN WE CAN THROW OUT OUR ENTIRE LITERATURE' or, alternatively expressed: 'THEN WE CAN PACK UP'.

Now, we come to the burning question about infectious diseases. For these also, the identical basis of complete ignorance concerning the entire biological developmental conditions and the developmental construction of all microbes in the area of fungi, bacteria, and primitive phases exists. Because the VIRUS STAGE predominantly involves but a single developmental stage, which can be located only in a particular place of the total cyclic range of developmental forms as PRIMITIVE PHASES (to which the so-called virus belongs) - BACTERIAL PHASES - FUNGAL PHASES, a factor has slipped into the monomorphically oriented doctrin which ultimately serves the final outcome. (Success of sanitary measures.) One exception here is e.g. the thyrus pathogen. Its bacterial form causes the main disease symptoms in the intestines, but after its disappearance from the intestines, it leaves behind primitive forms of colloidal or, at the least, ultramicroscopic remnants within the blood, through which the type of intestinal infection can possibly be identified by means of agglutination tests, weeks or even months after the recovery.

However, in contrast to epidemics and infectious diseases, an entirely different situation prevails for the complex of chronic diseases. The purely biological understanding that the primary infection of all the vertebrates with the endobiont MUCOR RACEMOSUS FRESEN occurred at a very early point of the development of vertebrates, hundreds of millions of years ago - explains the unusual and gigantic development of the primary symbiosis. Simultaneously, with this genesis of a primary symbiosis, a shift of the VIRUS STAGE onto most of the thousands of developmental phases in the endobiontic development has occurred.

Each of these innumerable series of pathogenic forms of the cycle of a singular microbial species has succeeded not only in diverse valences or sizes and developmental levels, but also in an unimaginable differentiation not only in the level of pathogenicity, but also into a nearly inconceivable differentiation into thousands of chronic diseases with diversified disease symptoms, which give a distinctly different disease appearance. Yet, all these diseases are able to blend into each other gradually, so that cancer makes itself known as rheumatism 12 - 15 years earlier; a stomach-ulcer terminates into cancer; leukemia develops into a case of Hodgkin and vice versa; and thousands of other unusual and surprising characteristics, can develop.

All these biological, purely CAUSAL FACTORS stand in contrast to the CONDITIONAL FACTORS.

These cancerogenic and dietetic factors as contributory, conditional causes have become more and more expanded so that their number nowadays exceeds one thousand, by far.

THE PREVAILING AND MOST ESSENTIAL FACTORS, HOWEVER, ARE THE FUNDAMENTAL DIETETIC ERRORS.

The nature of the dietary error consists in the fact that the primary parasite in the body, the endobiont is fattened into higher and higher developmental phases through habitually eating too much protein from animal and also plant sources, especially through the intake of meat, fish, and white flour products; the higher stages simultaneously are connected with higher and highest pathogenicity. The preference for COOKED FOODS also contributes to this. According to Enderlein, VEGETARIAN RAW FOODS alone are the foundation for total health. (We may not forget that the endobiont is a colloid of PLANT ORIGIN.)

Numerous doctors everywhere confirm that cancer can be healed by Isopathy based on living colloids (= protitit stage) of the causal factor. All this proves with absolute safety that only by the replacement of COLOIDS lost through the diets of civilized countries, the healing processes can be initiated and accomplished. This 'replacement' relates, in the case of cancer, to the just mentioned LOST COLOIDS.

Thus, let it be first summarized that the healing possibilities of cancer rest singularly within the possibilities of a primary symbiosis with a primary parasite, accomplished since primary times, and a purely BIOLOGICAL replacement of regulatory parts of its cycles that have become lost through our pseudoculture. All this lies outside of - let us say - schoolmedicine's therapy. It is a most disquieting paradox that we fight diseases with medications, which simultaneously destroy the defensive mechanisms of the body. We can even add to this that it is not merely a case of destroying the defensive mechanisms, but even more, a case of overfeeding the worst hereditary enemy of humanity.

For this therapy, it is to be particularly pointed out that - just as Prof. Dr. med. Friedmann considered it a requirement for patients healed through the turtle tubercle bacillus (today Mycobacterium phlei = UTLIN'S) to receive additional injections every 3 months for their health maintenance such follow-up, likewise, remains necessary to a higher degree after the healing of all serious ENDOBIOtic DISEASES, and particularly those considered to be 'incurable'. Not only is a subcutaneous injection of endobiontochondrinit (Mucokelhl) urgently necessary every quarter of a year, but also the strictest raw food diet must be maintained at least for several years. In all serious endobiotic diseases, such as cancer, Hodgkin, leukemia, the danger lies in owing the genes of the dangerous phases, and with them also higher and highest pathogenicity, the primary parasite constantly persists inside the human body. Thereby, the increased tendency to create highly pathogenic forms always makes itself felt when the opportunity is offered for overfeeding itself with protein.

This is entirely in contrast to all epidemic and infectious diseases. What helps here is only the regular weakening over months, or better weeks, by absorbing through rubbing in of uncountable billions of absolutely apathogenic colloids consisting of primitive phases or colloids, which have been cultivated outside the human body and beyond the culmination. Even better is an injection every 3 months.
Full Spectrum Micronutrient Treatment of Bacteria (Homeopathic Treatment of Bacterial Infections)

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Abstract
Two studies involving homeopathic or micronutrient treatment of bacteria are reported which indicate a natural, safe alternative to antibiotics. Both studies involve patients aged twenty-five to fifty. In the first study we take pin-prick blood samples from ten healthy patients, bring them on an inverted side, and then measure the speed and motility factors of the white blood cell. The patients are then given (in double-blind fashion) either water and alcohol or a homeopathic for bacterial stimulation. On evaluation under the microscope, the speed of the white blood cell is increased in the treatment group; the placebo group shows no change.

In the second study patients are evaluated for urinary bacteria from culture.

They are then prescribed the complex homeopathic, and reevaluated. The study shows that the complex homeopathic can indeed help the patients to deal with their bacterial infections.

The proposed mechanism is discussed, along with this short study.

Keywords
Bacteria, complex homeopathic, micronutrient, motility factor, phagocytosis

Procedure, Test #1
Ten healthy patients were chosen with normal immune systems, three of whom had active urinary infections determined with urinary culture tubes. (The culture tubes used in all tests were Wampole-type urinary culture tubes for bacteria-only culture.) With a pin prick on the finger, blood was taken from each patient and examined under a microscope (dark field) where the activity of the white blood cell could be observed. A sample streptococcus bacteria was placed into the slide. The white blood cells were then observed, and the recognition of bacteria, movement towards phagocytosis, and destruction of the bacteria were measured. Each participant was then given either a homeopathic of minute dilution of varying bacteria and herbals (description later) or a placebo of alcohol and water (five percent as in the remedy). Blood was again taken twenty minutes later, and white blood cells remeasured. The participants getting placebo were given the remedy one day later and those getting the remedy were given placebo one day later. The white cell motility was remeasured. Table 1 reports the results.

Procedure, Test #2
In a clinic, patients were cultured for the presence of urinary bacteria. Fifty-eight such patients over a three-year time were found to have bacteria of the following three types:

1. Proteus psuedomonas
2. Staph and strep.
3. E. coli
The amount was determined as:
1. None presenting in forty-eight hours 2. 50,000 approx.
2. 100,000 approx.
3. 150,000 approx.
4. Confluent growth

The patients with the bacteria were all given a multi-family homeopathic of low dilutions of the bacteria (BAC, Bacterial Fugue). Patients were also getting other therapy in the forms of herbs, vitamins or minerals. All were encouraged to make lifestyle changes such as more exercise and reduced consumption of sweets. After one month, on reevaluation, the urine was again cultured. Differences are reported on table #2.

Results

Test #1 reveals that there appears to be a thirty-percent increase in the white cell’s activity or speed of activity. It was also reported in the study that the phagocytosis was not only faster but more complete. The small size of the study indicates the need for further research.

In Test #2 the natural regimen which included the homeopathic was shown to effectively lower by fifty percent the bacteria count in urinary infections.

Discussion

From these results we can see that natural homeopathic nosodal complexes can be effective treatment for bacterial infections. This treatment works with the natural immune system to prompt its attack on the micro invader. Antibiotics work directly on the intruder, and thus work against the immune system. The proposed mechanism of immune system stimulation appears to be that of increasing the ability of the white blood cell to locate and phagocytize the bacteria. In the Quantum Biology book we propose a photon interaction that would explain the ability of the white blood cell to seek and destroy the bacteria. Quantum Biology elaborates further.

Our clinical evaluation of urinary bacteria seems to show that the homeopathic can have clinical effects, and our test procedure #1 shows that the proposed action of the homeopathic is that of stimulating the white blood cell. It must be further outlined that when we put bacteria into the slide and use the bacterial homeopathic (BAC), the mobility factors of the white blood cell are increased toward bacteria. If fungus is put into the slide, there seems to be no increase in the ability of the white blood cell to attack fungus. If a complex fungal homeopathic (FNG) is applied, and the white blood cell seems to move more quickly towards fungus.

Thus it appears that the homeopathic has a specific stimulation effect on the white blood cell in that the homeopathic of bacteria (BAC) stimulates bacterial phagocytosis, and the homeopathic of fungus (FNG) stimulates fungal phagocytosis. In both mechanisms the stimulation effect is on the immune system itself, and appears to enhance natural immunity factors.

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BOOKS


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FUNGUS - The species specific understanding of, and difference between bacterial phase and fungal phase developments in blood pictures.

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Diseases of the skin, digestive organs, urogenitary tract, mouth, etc. are caused by the multiplication and spread of fungal microorganisms known as mycelia. Mycoses (fungal infections) range in degree from unnoticed to fatal. They are directly related to asthma and allergic lveolitis reactions. They are dealt with by the immune system and competition from other microbes or earlier developmental phases of their own cyclogeny.

Fungal infections can be classified as: Superficial - those that affect hair, skin, nostrils, genitals, and oral mucosa. Subcutaneous - those which occur beneath the skin.

Deep - those which affect the internal organs, lungs, liver, bones, lymph, brain, heart, and urinary tract.

These infections often occur in those on long-term antibiotic therapies, corticosteroids, and immunosuppressant drugs. This type of opportunistic infection is common in those with the acquired immunodeficiency syndrome, commonly known as AIDS, and also CFIDS (chronic fatigue syndrome).

Some of these fungal forms are received from the environment, are transmitted sexually, or are transmitted through mother’s milk (Candida albicans). Candida remains in non-virulent phases of development until the terrain allows for its progression into more complex pathogenic forms. The efficacy of many of the SANUM fungal remedies is based on the sexual activity of the particular species of microorganisms (and/or the benign effect altogether, through competition, on the terrain) which is initiated through the process of reinstalling the microbial flora in the body in it’s apathogenic earlier phases of development. The flora that was installed then copulates with the pathogenic variety and shares the sexual information of the earlier phases, which, all things being equal (terrain modulation, removal of stressors, proper diet, lifestyle, etc.) causes the pathogenic form to convert or be reduced to the apathogenic variety. It is believed that the pathogens are also reduced in valence through the actual activity of the copulatory process.

The main causes of pathogenic albicans overgrowth are indiscriminate antibiotic application and dental inclusions from mercury tooth amalgams. Other factors include addictions to coffee, chocolate, drugs, unsafe sexual practices, immunocompromise, stress, chemicals, radiation, improper diet, etc.

The fungal overgrowth occurs because its natural competitors have been removed, in the case of antibiotic usage. In the case of dental amalgams or metals, it is due to decreased immunity from immunocompromise. The candida also adsorbs the mercury in the gut, thereby serving the function of keeping it from moving deeper in the system, to some degree. A good inclusion in a program of remedies for alleviation of mercury toxicity in the nervous system and brain is broken cell wall chlorella, because not only is it similar to the fungus in that it adsorbs the mercury, but also carries it away.

So-called fungal balls in phase contrast at 1,000X magnification. Note that the nuclei in the balls is barely or not discernible. The bacterial balls are roughly the size of the accompanying erythrocytes.

Primitive bacterial variants (the cysts)
Primitive bacterial variants and cell wall deficient fungal species

I begin this section with a quote from "Cell Wall Deficient Forms: Stealth Pathogens" by Lida Mattman.

"Wall-deficient bacteria are called fungoidal as they produce yeast-like (emphasis added) budding spheres or simulate molds with elongated branching threads. (See chondrothecit and free chondrit plates, respectively). How, then, does one solve the dilemma of recognizing a wall-deficient fungus? One can start with the vital activity in a fungal filtrate of Candida Albicans where the tiny 0.15-µm particles cannot possibly possess the wide hard wall of the parent. Colonies developing are usually comprised of twisted Gram-negative skeins so delicate that their course is interrupted by submicroscopic gaps. These fine threads of growth have never been described as part of the classic growth of fungi. (Emphasis added where bolded)."

The above description corroborates the findings of Dr. Günther Enderlein when he described such coccoidal manifestations as being either primitive bacterial variants or the most primitive mycelian strands.

Species of microorganisms which exhibit fungal variants in tissue (in vivo) are only microscopically visible in the blood as the most elementary and minute primitive spore forms, ranging in size up from approximately 0.15 microns. The notion that anyone is viewing fungus balls in phase contrast or darkfield is technically a complete misconception, as the forms which are being regarded as fungal developments are appearing in an alkaline milieu in the blood which will not support the fungal stages of development. This is not to say that the microorganisms may not be a species that can represent fungal developments elsewhere in the body. But this species specificity is indeterminable by viewing the fresh live blood, as there is not a way to distinguish which species is being viewed without culturing it out through the use of a medium, or by aging or heating the sample, under some conditions. This process changes the phase of development into phases that do not appear, again, in the alkaline milieu of the blood.

The forms that are being viewed (and mistaken for fungus stage) are actually colloid thecits, thrombocytes, chondrits, ascits, synascits, and mychits, all of which are part of the bacterial phase of development, which develops in an alkaline milieu. Also, the cell wall deficient forms, chondrits which are symplastic, are mistaken for fungal appearances. These chondrits do represent a fermentative process, but not at the level of a fungal appearance. They are even an earlier stage appearance than the most primitive cell wall mediated bacterial variants. The species, again, are unspecified upon appearance, as they are the same common stages that appear in many species of microorganism developmental cycles.
Some of these developments in polymorphic progressions are actually thrombocytes, and act as regulators, per Dr. Enderlein, and even (in some species) emerge from the red corpuscles in the serum. Some of these ball or balloon-like forms may become functionally pathogenic under certain specific terrain related conditions, and conversely, some of these developments certainly are an expression of the body’s capacity to mount a defense. The possibility of making these determinations within this phase of bacterial cellular developments requires that the viewer be able to distinguish the number of nuclei which appear within these delicate diaphonous bacterial cells. This microscopic imagery is only obtainable in a true, ultra illumination darkfield, employing superior plan achro or plan apo medical grade oil immersion iris diaphragm objectives and the proper condenser, which would be of the oil immersion variety also. This determination of the developmental progression of the bacterial variants is generally not able to be made in a phase contrast or differential interference field microscopically, because these fields generally do not provide adequate resolution to count the nuclei which appear within the ball-like cells that develop in conjunction with their primary nuclei (which are the cell wall deficient symprotits until they develop this cell wall mediated appearance). This is a crucial determination which must necessarily be made in order to distinguish the function which is related to the cell’s very appearance.

It should also be noted that the pathogenicity of most microbes only exists in one stage of development, being either viral sized, bacterial or fungal. The exception to this is the Endobiont, Muror racemosus Fresen, wherein any stage above the primitive stages is pathogenic.

Candida is never observed in its fungal phase in the blood because the blood’s inherent alkalinity supports it’s development only to a spore stage. These spores are extremely minute, and do not progress to visibility at the level where they can be distinguished from other similar microorganisms in the blood except possible through staining. The primitive bacterial phase microorganisms that are mistakenly called fungus may be part of the developmental phase of a species that has a fungal variant or may culminate as a fungus, but it is an error to call it a fungus in the blood. It is a species that has a fungal variant, and may also have a bacterial phase that occurs in the alkaline milieu of the blood. the ball-like appearances are bacterial phase developments.

These so-called ‘fungal balls’ appear very similar to each other, regardless of the number of nuclei, in phase contrast, but differ greatly in the higher resolution of Ultra darkfield. In the Ultradarkfield the number and valence of the nuclei determines their status as potential regulators or pathogens,
and it is a mistake to classify them all as the same thing, or as having the same function. Therefore, there may be a thect (primitive bacterial) phase in the life cycle of the species Candida Albicans. It follows that if Candida appears in the blood, it may exhibit a bacterial phase rather than the fungal phase, or certainly will appear as cell wall deficient spores.

Virus is a primitive stage of development of all microorganisms share and this phase is virtually invisible in the present context of known light microscopy techniques. Microbes are ubiquitous and can rise to their pathogenic phase from any other phase, as their progression is not linear, and the progression is terrain dependent. One must know which stage is pathogenic in order to treat related conditions. For instance, acid-fast rods are not necessary for tuberculosis.

**Candida Albicans**

![Image](https://via.placeholder.com/150)

*Highly visible nuclei in primitive bacterial thecits as viewed in ultra-darkfield at 1,000X. Note that the nuclei are very visible, allowing for evaluative differentiation of function of the microorganisms.*

These are the same microorganisms as viewed in the phase contrast pictures above.

This may be one of the most controversial and misunderstood areas in natural health, especially as related to the correction of this fungal condition. I have observed more individuals with failed programs for this condition than any other. And by failed program, I am referring to ending up on what I call the "coping diet". Candida sufferers know this one well. It is the one where you live on this very weird, limited diet and supplementation regimen because you have been unable to determine and reverse the stressors that are causing and maintaining the problem. This problem of epidemic proportions is where great numbers of the victims of indiscriminate antibiotic use and amalgam dental fillings recipients have ended up.

Pathogenic albicans (chronic candidiasis, more commonly known as candida or thrush) is generally caused by drug use, particularly antibiotic drug use, and poor diet, lowered immunity altogether, and metals, especially dental amalgams. Mercury will promote the growth of Candida, as it adsorbs the mercury and thereby protects the system. Candida cannot be effectively dealt with without dealing with the dental issues first. This is not an optional approach, but necessarily part of the primary approach.

The progressive decline which occurs as related to these mycotic conditions does so in this order. First the antibiotics (which are aimed at E-coli, strep, staph, etc, infections) wipe out the benign and necessary floras in the gut. The presence of these benign floras (L. acidophilus lactobacillus, bulgaris, B. longum, L.plantarum, L. salivarius, S. faecium, S. thermopolis) is necessary for the equilibrium in the flora system which keeps the competing (potentially pathogenic) yeast forms in check and allows these ever present yeast forms to be a natural occurrence which is apathogenic. The natural balance is maintained through competition of the multiple microbes which are present. It is interesting to note that many physicians treat this condition with additional antibiotics, causing tremendous problems. Many use Nystatin or other antifungals which can cause the creation of a resistant strain of fungus. They just mutate around it. The preferable remedies would be benign pro-biotic remedies such as SANUM Albicansan, Fortakehl and Pefrakehl which neither create nor further these harmful situations.

When their natural regulators and antagonists are wiped out through antibiotic drug use, the potentially harmless floras (colloids), which are generally kept in check, become more highly developed and propagate in massive numbers in the gut and tissues ( and thereby contribute to a conversely high alkaline pH in the blood), while producing their own species specific acids which maintain the terrain that they require for their maintenance and propagation. In this environment they become more and more virulent and even penetrate and root into the intestinal walls and invade the cells. These fungal microorganisms become quite at home in the cell, and can be considered to be a third primary potential parasite, along with Mucor and Aspergillus, because of the fact that this condition develops and propagate in massive numbers in the gut and tissues ( and thereby contribute to a conversely high alkaline pH in the blood), while producing their own species specific acids which maintain the terrain that they require for their maintenance and propagation. In this environment they become more and more virulent and even penetrate and root into the intestinal walls and invade the cells. These fungal microorganisms become quite at home in the cell, and can be considered to be a third primary potential parasite, along with Mucor and Aspergillus, because of the advent of runaway antibiotic usage over the many years. The only difference is that there is no known symbiosis occurring from the presence of Candida Albicans in the body.

Certain vegetable species colloidal microorganisms produce particular acids to maintain their environment. Examples of this are:

- **Mucor - lactic acid**
- **Aspergillus - citric acid**
- **Penicillium - penicillic acid**

The developmental life-cycle of microbes require differing pH conditions. Some microorganism species find their culminant phase of development in the bacterial phase. The different phases of development of microorganisms require the following terrains for development:

- virus, microbe, or primitive form strongly alkaline
- bacterial phase - weakly alkaline
- fungal phase - acidic

This developmental process is related to leaky gut syndrome, as the tissues are weakened, even by the infection. The microorganisms continue to multiply and then invaginate the venous wall (in spore form) and are carried again out of the bloodstream and multiply in the tissues where they deposit their acids, thereby enhancing the acid pH which they require for propagation. This is why individuals with candida feel acidic. At this point in the total progression of the problem, it is not just because their diet is acidifying. An acidifying diet may be one of the original factors which
contributed to this complex problem, though. At this stage it probably will not be possible to balance the pH through diet alone, because of the proliferation which is creating and maintaining its own environment, at that point, through the processes inherent to its upward development which are related to the production of acids.

To achieve the necessary optimum pH balances, these individuals must use some combinations of Alkala (or other bicarbonate combinations), baking soda baths, lemon juice and maple syrup combination (juices only where tolerated), fresh pineapple juice, and electrolyte solutions such as Cell Food, macro minerals, and all citrus fruits and their juices (again, if tolerated). At this point the reader may think "Fruit juices are full of yeast and sugars. Doesn't this feed the yeast?". This is true, but the point should not be to try to create a dietary approach in order to cope forever with the problem, but rather to just create a diet which is tolerable and supportive to elimination and then to deal with the problem therapeutically with other means being the primary methods. The imbalance is not created strictly by dietary imbalances and is not eliminated in this fashion either. I will elaborate to some degree on these approaches further on in the article.

pH balancing and gut flora enhancement or replacement alone will not affect this condition, and most practitioners experience temporary results or failure if they attempt this in combination with an exclusively dietary approach. Most will find some relief with this approach (diet combined with flora replacement) but will then end up living off of the shelves of health food stores, on a continual supplementation regimen that addresses some percentage of the associated symptomology and pathology. The reason for this failure is that the candida has the upper hand in the gut and also systemically, and has to be weeded out first or simultaneously, through utilization of therapies that the yeast cannot mutate around (as in the case of Nystatin and other antifungals).

These therapies may include SANUM remedies (isopathic combinations), ozone, colloidal silver, Beck's box, and Rife type or other electromagnetic field generators. These therapies may be effective in numerous different ways and for varying reasons nad must be recommended and guided by an experienced practitioner who will know how to combine all of the different elements. Often individuals expect immediate, symptomatic relief. In reality, one should expect to feel worse first, as a great deal of eliminative activity is in order. So it is important to understand that this condition was not created in all of its severity overnight, and it may take a fair amount of time in order to reestablish balance. For severe fungal infections a good approach is to utilize Utlin, Latensin, Pefrakehl, Notakehl, and Albicansan, w/ Alkala, colon cleansing, and kidney and liver drainage. Again, the stressors must be removed first or simultaneously.

The SANUM remedies reintroduce the original form of the microbe which appears in the body and is harmless, before it mutated. In a regulated pH environment this benign form copulates (exchanges information) with the pathogenic forms and they devolve into their original apathogenic forms and can be maintained in that range of development.

The mode of employ of Rife generators is to disturb the microbe's progression through the application of electrical Herzian fields and also through the stimulation of interleukin II and other immune factors. The Beck box emits pulsed microamps causing the blood and tissue cell membranes to oscillate, thereby interfering with the microorganisms ability to parasitize the cell by entering it an using its components and protection from the immune system. The cell membrane opens and closes rapidly, flushing the serum in and out, taking with it microorganisms which would otherwise be using the cell interior for its store of nutritional reserves and as an environment in which to replicate or develop into more advanced phases of manifestation. Simultaneously, nutrients are carried in and out, and feed the cell at a much more effective level.
Ozone stimulates interleukin 11, alkalizes the body through the production of ash, oxygenates the blood and tissues, and provides higher forms of oxygen (O3 through O13?, or higher depending how it is produced) which share electrons with bacteria, virus, fungus, toxins, chemicals, and reduce all to ash or nonpathogenic forms.

Colloidal silver interferes with the enzyme system that the anaerobic microbes use for respiration. Therefore they cannot mutate around it or become resistant and are eliminated instead. Special care must be taken with colloidal silver to use one that is strong enough and simultaneously supplement the gut flora, as the silver can also interfere with aerobic microorganisms. Failing to supplement the flora, or using a product that only contains 3 to 5 parts per million of silver, appears to be the main limitations in terms of effectiveness. Naturally this approach, like any other, must be accompanied by a full regimen that includes cycles of purification, balancing, and rejuvenation. Contrary to popular gossip to the contrary by invested promoters, there appears to be some negative side effects to colloidal silver consumption, when used over long periods of time and in relatively high amounts. These include drainage problems and the destruction of intestinal floras. For some, the results of oral use have been complicated gastrointestinal dysbioses and Fortakehl, Albicansan and Pefrakehl and other SANUM preparations in combination may be a better approach as they do not tend to produce those negative results.

Many individuals have been known to exhibit extreme Herxheimer’s (healing crisis) reactions with silver. This has particularly been a problem with chronic fatigue syndrome. Lymphatic drainage (homeopathic, herbal, or 714-X, which also regulates the immune system) along with juicing, consumption of a minimum of eight 8 oz. glasses of Crystal Energy water and/or other natural fluids such as juices and herbal teas, colonies or colemas, lymphatic massage, dry brush massage, bouncing exercises, and walking are all required in combination with colloidal silver and also the other aforementioned approaches. It is not useful or necessary to load up the body with unnatural numbers of metals such as silver over extended periods of time in order to maintain good health. It is better to understand the overall biological terrain requirements and meet them through the adjustment of lifestyle. Nevertheless, it may be very useful to apply colloidal silver for a measured period of time because of its ability to interfere with the respiratory enzymes of the microorganism. They also cannot mutate around this effect.

Ozone will cause less of a negative reaction than silver. The reaction will not as likely be a result of the breakdown of toxins, but rather congestion in the lymph and liver. This is because the ozone reduces toxins to ash, so they don’t get recycled through your blood stream as poisons on the way out (and by association, through the brain). The Rife and Beck therapies also require all of the same drainage requirements, and the lymphatic thumper (Beck’s design) may be useful while the fungus is being reduced The best approach, as always, is to combine elements based on the individual’s tolerance and needs. Diet alone most likely will not correct this condition of candida overgrowth, but is certainly a necessary adjunct to any program. The dietary needs and reactions will be observed to change greatly after the problem has been addressed.

Many people have been misled through the wrongly held beliefs of most primarily dietarily oriented natural therapists on this subject. Therefore, I recommend that practitioners understand that the microbe must be reduced both in number and also to its apathogenic form, while adjusting the pH. Acidophilus replacement is not the answer, as the higher phase dominant yeast forms (which have overwhelmed the immune system’s capacity to control them) are at such a high valence that they just feast on or suppress the installed lactobacillus strains when the subject is without proper therapeutic intervention.

This mycotic condition was not generally created through dietary means alone, and although diet will be extremely necessary and instrumental in a program of complete recovery, it will not on its own be adequate therapeutically, which is the overwhelming and ongoing experience of the numerous masses who are led in the direction of this belief. The immune response is overwhelmed, then the body temporarily needs “sexual immune system” in the form of the aforementioned therapeutic approach, or other effective means.

Many fungal disorders respond well to a series of courses of Latensin, Notakehl, Pefrakehl, Fortakehl and Albicansan. Reactions may accompany these remedies, and they should only be administered by a trained health professional. These remedies are not antibiotic, but pro-biotic,
and work remarkably well. Because the type of fungal dysbiosis which is occurring will not be determinable in the blood picture, the remedies must be applied on the basis other forms of testing such as point testing, Kinesiology, etc.

A strong empirical understanding of how the condition present; and what the primary stressors are in the subjects total life picture is likely the most important means of evaluation of both condition and remedy.

About the Author

Michael Coyle is a Natural Therapist, researcher and educator, and the author of the definitive NuLife Sciences Applied Microscopy for Nutritional Evaluation and Correction- Workbook text. Michael generally conducts monthly or bimonthly training for health care practitioners in live-blood analysis. For further information on NuLife Sciences and Michael’s work and for a schedule of training dates and a complementary microscopy equipment catalogue, please see ad below.

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Remember: do not eat foods boiled in oil, get good cold processed vegetable oils and thus good fatty acids, not trans or cooked animal oils. Eat only Levulose (fructose fruit sugars) not Dextrose (cane, corn, potato, grape sugar). Wellness is your Reward. Remember to chew your food, fruits alone, fluids alone, and melons alone.

Make vegetable and fruit juice part of your daily Wellness Healthy Regime.
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Investigator-sponsored Trials

Thousands of clinical trials are conducted each year around the world. They are sponsored or funded by a variety of organizations such as medical institutions, foundations, voluntary groups, and pharmaceutical companies, in addition to federal agencies such as the National Institutes of Health and the Departments of Defense and Veterans Affairs. In addition, some clinical trials, sponsored by individual physicians, are called investigator-sponsored trials (ISTs).

ISTs are like other clinical trials, except that they are mostly single-center studies with an individual physician acting as both the lead investigator and the sponsor. As a result, ISTs tend to be minimally funded. However, if the drug or medical device under investigation in the trial is already available commercially (perhaps for another indication or population), the investigator will often try to engage the manufacturer to obtain some form of funding (e.g., donating the drug or medical device). Data generated through ISTs are often published and contribute significantly to academic research that in turn is referenced and utilized by other treating physicians and entities involved in the disease area or condition. Ownership of the products being investigated in the ISTs remains with the patent holder or manufacturer. Therefore, if not the patent holder, he may neither submit the data from ISTs to a regulatory authority nor obtain approval to market the product. The investigator will need to work with the patent holder to obtain the rights to the product and it may be necessary to license the product to a manufacturer to secure the funding needed for the resources required for product approval. Data from ISTs are accepted by many regulatory authorities to support marketing applications or supplements as long as the trials were conducted in strict conformance Good Clinical Practice guidelines and the regulatory authority has access to uninterpreted data from the trial.

ISTs are held to the same regulatory standards as all trials involving human subjects. Investigators who sponsor and/or participate in clinical trials have serious responsibilities because of the involvement of human subjects and their risks in participating. There are many regulations specifying the responsibilities of sponsors and investigators. Investigators who are both sponsors and investigators (investigator-sponsors) of clinical trials must shoulder both sets of responsibilities and become very familiar with all applicable laws and regulations surrounding the conduct of human studies to ensure compliance. In the US, the Code of Federal Regulations (21 CFR Part 312 Subpart D for drugs and biologics and Part 812 Subparts C and E for medical devices) describes these serious responsibilities for both the sponsor (21 CFR 312.50) and the investigator (21 CFR 312.60). Additional responsibilities and requirements are described throughout 21 CFR 312 and 812; those specifically relating to informed consent and IRB approval are described in 21 CFR Parts 50 (Protection of Human Subjects) and 56 (IRBs), respectively. The specific responsibilities for sponsors and investigators in drug and biologic clinical trials are similar but not identical to those for sponsors and investigators in trials for medical devices. Investigator-sponsors must determine whether an Investigational New Drug application (IND or Investigator IND) must be submitted to the US Food and Drug Administration (FDA) before beginning the trial. An IND is usually required if the study involves an unapproved product or an approved product for a new indication, or evaluation of an approved product in a new patient population. The IND must include all

Here is an article from the FDA wanting you the therapists to do clinical research. If you have an idea of what your SCIO has done to help your patients here is your chance to prove it to the world. You can write up a case study on a patient and submit it to us for publication. You might get approved to present it at our world congress in Budapest. But if you want to do a proper study here is your chance.

The FDA is helping people to do Investigator Sponsored Trials, known as IST. The following article is from an FDA approved journal on compliance. We have the proper Institutional Review Board, we have a study protocol for you to work with or amend for your needs, and we have the medical supervision. We have all you need. You just need an idea, some patients, and the dedication to see it thru. If you can finish a full 20 patient dbl blind study you can get a refurbished SCIO from the sponsor Maitreya / SCIO USA. So think this is your chance to get your name on a study and show the world what you are doing. We can do it together.

Prof. Desiré Dubounet
investigators sponsor clinical trials in spite of the tremendous regulatory burden such studies entail. A key challenge investigator-sponsors face is the large amount of time they must dedicate to the study and how that impacts caring for patients in their medical practices. The investigator-sponsor must supervise the trial, interact with the IRB, develop budgets, deal with audits and inspections and travel as needed. Well-qualified, experienced, trained and efficient personnel (in particular the study coordinator, but also including the sub-investigators, research nurses and laboratory personnel) become essential to the investigator in managing the trial workload.

Investigator-sponsors who take the time at the beginning of the trial to train any noncertified personnel in the International Conference On Harmonization (ICH) guideline, Good Clinical Practice E6(R1) will generally save time on the back end and improve the quality of the study.

<table>
<thead>
<tr>
<th>Table 1. Advantages for Investigators In Sponsoring Clinical Studies</th>
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<tr>
<td>1. Patient care: Investigators can more rapidly offer their patients unapproved but promising products or</td>
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<tr>
<td>2. Scientific collaboration: ISTs allow Investigators to remain at the cutting edge of their therapeutic interests.</td>
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<td>3. Scientific contribution: When Investigators publish the results of their studies, they enable manufacturers to</td>
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<tr>
<td>4. Professional recognition: Publications provide the Investigator with professional recognition as an expert or thought leader in the field. There is value in publishing even those studies that did not meet their primary hypotheses.</td>
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<tr>
<td>5. Funding: As the Investigator becomes well-known in the field, he is able to secure funding more easily, thereby furthering future research.</td>
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What’s in It for the Patient?

ISTs are a very good option for patients to obtain access to new and as yet unapproved research therapies. People often participate in ISTs because they have exhausted approved treatment options that either did not work for them or produced intolerable side effects. Carefully conducted ISTs are a relatively safe and quick way to get access to products that have the potential to treat the disease or condition that have the potential to improve patient health or quality of life. Further, since investigators are often specialists in the disease area being studied, some patients participate to gain access to expert medical care for their condition, thereby playing a more active role in their own healthcare. Still others participate in ISTs for the purely altruistic reason of wanting to contribute to the advancement of medical knowledge.

Not all patients who apply to participate in an IST will be accepted. Each patient must meet predetermined eligibility criteria, such as age, sex, type and stage of disease, previous treatment history and other medical conditions. These criteria help to reduce the amount of variation and “noise” in the study, without threatening the scientific integrity of the trial, by removing medical variations that might complicate data analyses and the ability to draw relevant and sound conclusions. Patients may also be excluded because the researcher has already enrolled the required number of participants needed to test the hypothesis stated in the study protocol.

Once subjects are selected to participate in the IST, the law requires the investigator to obtain informed consent. The investigator must provide patients with complete and accurate information about what will happen during the trial and disclose all known or suspected risks. Participants must sign a written informed consent form, which indicates they understand the trial is a research study, have been informed about the associated risks and are aware that their participation is voluntary and they can leave the clinical trial at any time. Additionally, the consent form should outline in detail the amount of time participants will have to devote to the trial and the types of activities; for example, they may need to visit the study site at specified intervals, be subjected to additional tests, get more treatments than are normally necessary, stay in the hospital and/or follow complex dosage requirements. Patients use the material in the informed consent document to decide whether or not to enter a clinical trial and to make an informed decision about the level of risk they are willing to accept before they enter the trial.

The investigator should clearly explain to participants (when applicable) that they may not receive the investigational drug and may instead receive a placebo. They should also be prepared mentally for partial or no effectiveness from the treatment. The investigators should encourage the participants to learn as much as possible about the clinical trial and the investigational treatment and to freely discuss their questions and concerns with members of the research team.

Registration of Clinical Trials

Investigators and sponsors usually register their trials with databases such as http://clinicaltrials.gov/, an interactive online database managed by the National Library of Medicine. Clinicaltrials.gov facilitates the registration of trials in accordance with the International Committee of Medical Journal Editors (ICMJE) initiative requiring prior entry of clinical trials in a public registry as a condition for publication. Members of the public can find information about clinical trials by searching http://clinicaltrials.gov/ as it lists both federally and privately supported clinical
research. The site, which is updated regularly, offers information on the objectives of each trial, eligibility criteria, locations and contact details to obtain more information.

Summary

For patients, ISTs are a viable option for obtaining access to unapproved treatments. For physicians acting as investigator-sponsors, ISTs offer key benefits such as professional recognition and the opportunity to continue participating and collaborating in cutting-edge scientific investigations (see Table 1). However, ISTs present challenges to both investigators and patients. To be successful, investigators and investigator-sponsors must be highly motivated leaders with the skills and drive to coordinate the activities of many people to ensure completion of all study activities. Success generally requires careful planning, evaluation and management of the multiple aspects of conducting a clinical trial in accordance with all applicable regulations and ensuring that the various pieces of the puzzle fall into place seamlessly.

While ISTs provide patients with accelerated access to new treatments, these treatments have not received thorough review by a regulatory agency such as FDA or the European Medicines Agency, and as such, risks and uncertainties are unavoidable. Volunteers need to ask relevant questions of the researchers, remain vigilant for changes in their health status (particularly adverse changes), report them immediately and, in general, be aware that they shoulder significant responsibility as participants in an IST.

References

- Good Clinical Practice: Consolidated Guideline E6(R1), ICH (June 1996).

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I prayed to God to give me the Wisdom of Solomon, he gave me major Problems to solve
I asked God for Strength, he gave me Resistance to make me Strong
I asked God for Intellect, he gave me the Light of Enthusiasm and the Breath of Inspiration
I asked God for Courage, he gave me Obstacles to overcome and Hatred and Anger to defeat
I asked God for Love, and he gave me Suffering People to help, he gave me Opportunity to grow and Opportunities to help other
I did not get what I wanted... but God gave me what I needed day by day