

Lesson B

Systemic Candidiasis

Elimination using the DaVinci Candida Protocol

One of the health challenges that I was facing many years ago was Candida, also known as Systemic Candidiasis; systemic means ‘all the body.’ It took me over 11 years to finally rid myself of Candida, after pursuing many different therapies from experts who had written books on the subject. I will share with you the secrets that I discovered while formulating the DaVinci Candida Protocol – which has now been published in peer-reviewed journals.^{1, 2}

While rapaciously reading the literature on Candida, as well as attending lectures, I discovered that many practitioners were trying to kill off the pathogenic, mycelial form of Candida using natural substances, without making any attempt to convert the pleomorphic, pathogenic Candida back to the normal, budding form. It is also critically important to change the internal milieu³ using the detoxification protocols that were mentioned in Chapter 4 – this is another deficit of many Candida protocols out there.

Candida is a real scourge of the 21st century, fuelled by a toxic body and an abuse of antibiotics and sugar-laden products. The prevalence of Candida in the general population is difficult to determine as there are no epidemiological studies that I am aware of, but generally I am picking up about 25% - 30% of my patients who fit the picture of systemic Candidiasis. People suffering chronic diseases are more likely to have Candida, both related to the imbalance of their internal milieu, but also the number of drugs that they have been treated with – I would go as far as to say that all patients with cancer have systemic Candidiasis.

Indeed, one Italian oncologist, Dr. Tullio Simoncini, has gone as far as to say that “cancer is Candida.”

1 Georgiou, G.J. *British Naturopathic Journal*, Vol. 25., No. 1 & 2, 2008.

2 Georgiou, G.J. *Explore!* Volume 14, No. 6, 2005.

3 Internal milieu – a nutrient-filled fluid matrix, which bathes all the cells of the body – an important factor for keeping various bacteria alive and spreading. See Chapter 2 for more details.

There have been a number of other books written on systemic Candidiasis which have been considered as classics as they set the path for thinking about this systemic disease with so many symptoms that the diagnosis is often confusing – it was termed by Dr. Truss as “The Missing Diagnosis”.^{4,5,6,7}

What is Candida?

Traditionally, fungi are considered plants, but they contain no chlorophyll and cannot make their own food. Fungi tend to inhabit cool to tropical climates and are found in the air we breathe as well as in moist and shady soil, water, manure, dead leaves, fruit, leftover food and a wide variety of places and circumstances.

Candida albicans is a yeast that lives in the mouth, throat, intestines and genito-urinary tract of most humans, and is usually considered to be a normal part of the bowel flora (the organisms that coexist with us in our lower digestive tract). It is actually a member of a broader classification of organisms known as ‘fungi.’ *Candida* are unicellular yeasts, somewhat larger than bacteria. They divide mostly asexually, can switch between a yeast and a pseudohyphal or hyphal form, and, like other yeasts, flourish in habitats where there is an abundance of sugar.

The normal budding forms can be cultured from faeces in up to 80% of healthy adults.⁸ *Candida* numbers increase significantly following antibacterial therapy,⁹ but seem to be unaffected by a refined carbohydrate

4 Trowbridge JP and Walker M. *The Yeast Syndrome* Bantam Books, New York, New York 1986.

5 Truss C: *The Missing Diagnosis* Birmingham Alabama (The author), 1983.

6 Crook, WG. *The Yeast Connection and the Woman*. Professional Books, Jackson TN 1987.

7 Crook WG: *The Yeast Connection, A Medical Breakthrough 2nd Addition* Professional Books, Jackson, TN, 1984.

8 Bernhardt H, Knoke M. Mycological aspects of gastrointestinal microflora. *Scand. J Gastroenterol* 32(suppl 222): 102–106, 1997.

9 Seelig MS. Mechanisms by which antibiotics increase the incidence and severity of candidiasis and alter the immunological defences. *Bacteriol Rev* 1 30:4442–4459, 1966.

diet.¹⁰ It seems likely that intestinal *Candida* numbers are regulated in a similar way to intestinal bacteria.¹¹

There are 81 different types of *Candida* species such as *C. albicans*, *C. glabrata*, *krusei*, *lusitaniae*, *parapsilosis*, *tropicalis* and more. *Candida albicans* and *C. glabrata* are the two most common *Candida* species that cause systemic Candidiasis in humans but the other species may also be responsible.

C. albicans is a diploid organism which has eight sets of chromosome pairs. Interestingly, *Candida* is one of the few microorganisms that has a diploid gene controlling the same protein – this means that it is capable of pleomorphic activity: being able to mutate forms from the budding form to the mycelial (fungal), pathogenic form. Its genome size is about 16 Mb (haploid) – about 30% greater than *S. cerevisiae* (baker's yeast).

The pathogenesis of disease associated with *Candida* in humans is driven by host factors. Some strains of *Candida* produce gliotoxin, which may impair neutrophil function.¹² However, *Candida* is a polyantigenic organism containing up to 178 different antigens,¹³ which might explain the number of cross-reactions to yeasts (*Malassezia*, bread/brewers yeast) moulds¹⁴ and even human tissue.¹⁵

It was shown recently that there is a potential cross reactivity with gluten because of several amino acid sequences that are highly homologous to alpha-gliadin and gamma-gliadin. Such a mechanism might lead to wheat intolerance with its accompanying symptoms, and even trigger Coeliac disease in genetically susceptible people.¹⁶ Furthermore, a placebo-

10 Weig M, Werner E, Frosh M, Kasper H. Limited effect of refined carbohydrate dietary supplementation on colonization of the gastrointestinal tract of healthy subjects by *Candida albicans*. *Am J Clin Nutr* 69:1170–1173, 1999.

11 Fitzsimmons N, Berry DR. Inhibition of *Candida albicans* by *Lactobacillus acidophilus*: evidence for the involvement of a peroxidase system. *Microbios* 80: 125–133, 1994.

12 Shah DT, Jackman S, Engle J, Larsen B. Effect of gliotoxin on human polymorphonuclear neutrophils. *Inf Dis Obstet Gynecol* 6 : 168–175, 1998.

13 Poulain D, Hopwood V, Vernes A. Antigenic variability of *Candida albicans*. *CRC Crit. Rev Microbiol* 12:223-70, 1985.

14 Koivikko A, et al. Allergenic cross-reactivity of yeasts. *Allergy* 43:192-200, 1988.

15 Vojdani A, Rahimian P, Kalhor H and Mordechai E. Immunological cross reactivity between *Candida albicans* and human tissue. *J. Clin Lab Immunol* 48:1-15, 1996.

16 Nieuwenhuizen WF, Pieters RH, Knippels LM, Jansen MC, Koppelman GJ. Is *Candida albicans* a trigger for the onset of coeliac disease? *Lancet* 361: 152–2154, 2003.

controlled crossover study has revealed that dietary yeast may affect the activity of Crohn's disease.¹⁷

Candida produces alcohol and contains glycoproteins, which have the potential to stimulate mast cells to release histamine, and apparently prostaglandin (PGE2) –inflammatory substances which could cause IBS-like symptoms.^{18,19} Other circumstantial evidence supports the theory of yeasts as a trigger for IBS: Secretory immunoglobulin A (SIgA) is front line in the defence of mucous membranes, especially in the intestine where it is active against infectious agents and certain antigens.²⁰ At least three different *Candida* species are able to produce proteases which can degrade: IgA1, IgA2 and SigA.²¹ This protease activity can induce polyclonal B-cell response and inflammation. An infection of the intestinal mucosa with *Candida* might lead to an inactivating of SigA, and inflammation within subgroups of patients with IBS symptoms.

Candida is sensitive to a number of antifungal agents, such as nystatin, which is not absorbed from the gastrointestinal tract after oral administration. It destroys *Candida* by binding to sterols in the cell membrane, and thereby increasing permeability with loss of cellular contents.

The problem begins when the normal, budding *Candida* species that we have in our gut – which 90% of babies are born with – actually change forms to the mycelial or hyphae form, which is pathogenic or disease-causing. This only happens when the internal milieu of the gut and other tissues becomes more acidic, either through taking a variety of drugs such as antibiotics – that wipe out the friendly flora of the gut – or through eating very acidic foods such as sugar and other refined products.

17 Barclay GR, McKenzie H, Pennington J, Parratt D, Pennington CR. The effect of dietary yeast on the activity of stable chronic Crohn's disease. *Scand. J Gastroenterol* 27 :196–200, 1992.

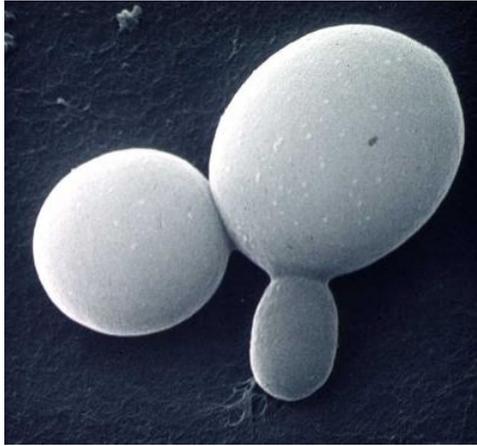
18 Romani L, Bistoni F, Puccetti P. Initiation of T-helper cell immunity to *Candida albicans* by IL-12: the role of neutrophils. *Chem Immunol.* 68:110-35, 1997.

19 Kanda N, Tani K, Enomoto U, Nakai K & Watanabe S. The skin fungus-induced Th1- and Th2-related cytokine, chemokine and prostaglandin E2 production in peripheral blood mononuclear cells from patients with atopic dermatitis and psoriasis vulgaris. *Clinical & Experimental Allergy*; 32(8): 1243-50.

20 Brandtzaeg P. The mucosal B cell and its functions. In: Brostoff J, Challacombe S (eds): *Food allergy and intolerance*. London: Saunders; 127-171, 2002.

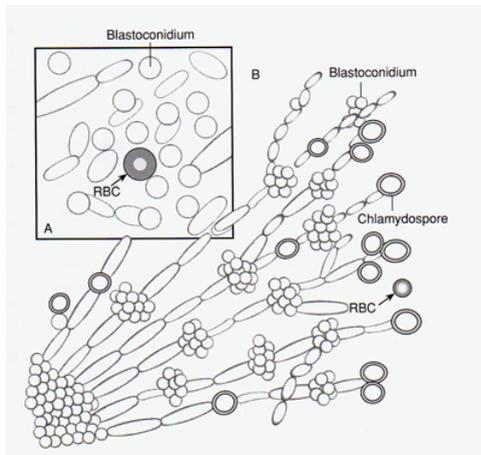
21 Reinholdt J, Krogh P, Holmstrup P. Degradation of IgA1, IgA2, and S-IgA by *Candida* and torulopsis species. *Acta Path Microbiol Immunol Scand.* Sect C 95:65-74, 1987.

Lesson B – Systemic Candidiasis



Normal, budding Candida

It appears that this change in pH can trigger genes in the Candida to begin a pleomorphic change into a stealth organism that is very virulent – if fed with sugar, it can increase itself from 1 to 100 cells in 24 hours. These 100 cells can then produce 100 each in the next 24 hours, and so on. And so by the 4th day we will have 100 million Candida cells – this is really exponential, explosive growth!



Mycelial, pathogenic form: Pseudohyphae with chlamydospores (grape-like spores) making up the clusters of blastoconidia

What is the role of Candida?

Candida has two parasitic functions:

To gobble up any putrefied food matter in our digestive system (mostly caused by improper digestion, due to low stomach acid).

After we die, Candida acts to decompose the body, feeding off our corpses and returning us to Mother Earth!

When conditions are right, they transform their ‘bud’ form into the mycelial state, where filament-like roots invade deep into the mucosa in search of nourishment. The mycelia release phospholipase, an enzyme that attacks cell membranes of the mucosa: splitting fatty acids, generating free radicals and causing inflammation in the intestine and other tissues.

Wherever the yeast colonize they cause symptoms, whether an itchy anus or vagina, diarrhoea, heartburn or sore throat. The mycelial forms release 79 different toxic by-products that damage specific tissues and organs, and will determine which symptoms will occur. These toxins, such as acetaldehyde, can also compete with hormone receptor sites and cause hypothyroidism, hypoestrogenism as well as binding cortisone, progesterone and other hormones for its own use and causing endocrine deficiency states.²²

How do you get it?

Candida albicans prefers people. *Candida* enters newborn infants during or shortly after birth. Usually, the growth of the yeast is kept in check by the infant's immune system and thus produces no overt symptoms. But, should the immune response weaken, the condition known as oral thrush can occur as a result. By six months of age, 90% of all babies test positive for *Candida* and by adulthood, virtually all humans play host to *Candida albicans* and are thus engaged in a life-long relationship.

Candida coexists in our bodies with many species of bacteria in a competitive balance. Other bacteria act in part to keep *Candida* growth in check in our body ecology, unless that balance is upset. When health is

²² Calderone, R. A., and R. L. Cihlar (ed.). *Fungal pathogenesis: principles and clinical applications*. Marcel Dekker, Inc., New York, N.Y., 2002.

present, the immune system keeps *Candida* proliferation under control, but when the immune response is weakened, *Candida* growth can proceed unhindered. It is an ‘opportunistic organism,’ one which – when given the opportunity – will attempt to colonize all bodily tissues. The uncontrolled growth of *Candida* is known as ‘*Candida* overgrowth’ or ‘*Candidiasis*.’

Unfortunately, there are many factors in our modern society that can upset the ecological balance of the body, weaken the immune system and thus allow the yeast to overgrow. Of these, the major risk factors which may predispose one to the proliferation of *Candida* are:

- ❖ Steroid Hormones, Immunosuppressant Drugs such as cortisone, which treat severe allergic problems by paralyzing the immune system's ability to react.
- ❖ Pregnancy and Birth Control Pills which upset the body's hormonal balance.
- ❖ Diets High in Carbohydrate and Sugar Intake, Yeast and Yeast Products, as well as Moulds and Fermented Foods
- ❖ Prolonged Exposure to Environmental Moulds
- ❖ Antibiotics and Sulpha Drugs – probably the chief culprit of all: antibiotics kill all bacteria. They do not distinguish good bacteria from bad. Antibiotics kill the ‘good’ flora which normally keeps the *Candida* under control. This allows for the unchecked growth of *Candida* in the intestinal tract. It is normally difficult to recover a yeast culture from bodily surfaces. However, after 48 hours of taking tetracycline, yeast can be cultured easily from anyone.

The prevalence today of *Candida* may be most directly related to the widespread societal exposure to antibiotics – from prescriptions for colds, infections and acne; and from additional consumption of antibiotic-treated foods such as meats, dairy, poultry and eggs. Notably, antibiotics do not kill viruses; they only destroy bacteria. Yet, they are universally prescribed for all colds, flu and other viral problems. Such indiscriminate and extensive use of antibiotics is not only considered a primary cause of *Candida* overgrowth, but is recently being found to be responsible for the unbridled development of ‘killer bacteria.’

The rapid and direct proliferation of the yeast following antibiotic use strongly suggests that the problem of *Candida* is one which stems from an inner state of imbalance, rather than from an outside attack by a microbe or disease. This is a very important point to understand if one wishes to get

rid of an overgrowth problem, suggesting that Candida is not so much a problem as is the body's own failure to control it!

Why is it a serious problem?

Once begun, if not recognized and treated appropriately, Candida overgrowth can result in a self-perpetuating, negative cycle. Large numbers of yeast germs can weaken the immune system, which normally protects the body from harmful invaders. Even though Candida is part of the ecological balance in the body since birth, it is still recognized by the immune system as a foreign body that needs to be controlled.

So, when overgrowth occurs, a chronic stimulation of the immune system results – every second, every minute, every hour, every day, every month, every year – in an attempt to regain control. In time, it is believed that this can exhaust the immune system, predisposing one to more serious degenerative processes. Many believe chronic drains on the immune system such as Candida and parasites can play a direct role in the development of cancer and AIDS. Seen in this light, Candida overgrowth should not be taken lightly.

Candida produces its effects by two routes. Firstly, there is a direct route initially by invasion of the gut and the vagina – Candida is capable of spreading along the entire length of the gut. The presence of chronic vaginitis can often indicate widespread Candidiasis. Secondly, there can be indirect effects caused by the spread of toxins through the bloodstream to other sites in the body.

Candida can alter its form from a simple yeast organism to a 'mycelial fungal form' with a network of root-like fibres called rhizoids. These can penetrate and damage the gut lining, allowing foreign food proteins to be absorbed into the bloodstream and to challenge the immune system, so that multiple food allergies or intolerances may result.

Toxic waste - acetaldehyde

Toxic waste from mycotoxins²³ from Candida infestations can also be absorbed into the bloodstream causing 'Yeast Toxin Hypersensitivity'

23 Hussein, H. S., and J. M. Brasel. Toxicity, metabolism, and impact of mycotoxins on humans and animals. *Toxicology* 167:101-134, 2001.

leading to many symptoms such as anxiety, depression and impaired intellectual functioning. The main toxin implicated here is acetaldehyde, which is a normal by-product of metabolism, produced in small amounts and rendered harmless by the liver. If, however, there is excess production of this by *Candida*, particularly in low-oxygen environments, and a lack of the appropriate liver enzymes – which tend to be deficient in 5 per cent of the general population – the acetaldehyde will become bound strongly to human tissue. This may cause impaired neuro-transmission in the brain, resulting in anxiety, depression, defective memory and cloudy thinking.

Acetaldehyde intermediates cause a good part of the cellular damage that occurs. Acetaldehyde in the intestinal wall and liver will disrupt intestinal absorptive processes, as well as impairing the function of lymphocytes and red blood cells.²⁴ Acetaldehyde damages host cells by attacking them with free radical and peroxidative mechanisms. When yeast cells are deficient in oxygen, they are also more resistant to immune defenses and so patient hypoxia is a major contributing factor to yeast susceptibility for these two reasons.

Adequate amounts of glutamine, selenium, niacin, folic acid, B6, B12, iron, and molybdenum will allow the acetaldehydes to be metabolized into acetic acid, which can be excreted, or converted further into acetyl coenzyme A. Supplementing with these nutrients during the treatment of *Candida* will help to reduce unpleasant symptoms related to acetaldehydes.

Effects on immunity

Some 40 to 60% of all the immune cells in our body are in the gut. The immune system may also concurrently be adversely affected by poor nutrition, heavy exposure to moulds in the air, as well as an increasing number of chemicals in our food, water and air, including: petrochemicals, formaldehyde, perfumes, cleaning fluids, insecticides, tobacco and other indoor and outdoor pollutants. Over 10,000 chemicals have been added to our food supplies alone that were not there just a hundred years ago! We do not have the genetic recognition of these substances as foods or as useful additions to our bodies.

24 Truss, CO. Metabolic abnormalities in patients with chronic candidiasis – the acetaldehyde hypothesis, *Journal of Orthomolecular Medicine*, 13:63-93, 1984.

Specifically, yeasts tend to secrete a toxin called Gliotoxin,²⁵ which can disrupt the immune system by inactivating enzyme systems and producing free radicals, thus interfering with the DNA of leukocytes. It is also cytotoxic.

The resulting lowered resistance may not only cause an overall sense of ill health, but may also allow for the development of respiratory, digestive and other systemic symptoms. One may also become predisposed to developing sensitivities to foods and chemicals in the environment. Such ‘allergies’ may in turn cause the membranes of the nose, throat, ear, bladder and intestinal tract to swell and develop infection.

Such conditions may lead the physician to prescribe a ‘broad spectrum’ antibiotic . . . which may then further promote the overgrowth of *Candida* and strengthen the existing negative chain of events, leading to further stress on the immune system and increased *Candida*-related problems. This I have seen happen in clinical practice many times. If only physicians could think laterally for a minute, many hundreds of thousands of superfluous antibiotic prescriptions could be done away with to the benefit of the patient as opposed to the pharmaceutical industry.

Heavy metals such as mercury and others are found in higher amounts when *Candida* is present as the *Candida* yeasts actually store the metals in their cells – these metals are then released when the *Candida* die during treatment. It is therefore wise to begin a heavy metal chelating programme concomitantly with the *Candida* protocol.²⁶

Occupational exposure studies have found that mercury impairs the body's ability to kill *Candida albicans* by impairment of the lytic activity of neutrophils and myeloperoxidase in workers whose mercury excretion levels are within current safety limits. Such levels of mercury exposure were also found to inhibit cellular respiratory burst, thus encouraging the proliferation of *Candida*. Immune Th1 cells inhibit *Candida* by cytokine related activation of macrophages and neutrophils.

25 Iwata, K.; Yamamoto, Y ‘Glycoprotein toxins produced by *Candida albicans*.’ Proceedings of the Fourth international conference on the mycoses, PAHO scientific publication #356, June 1977.

26 See www.detoxmetals.com for such a programme, using a scientifically-tested natural toxic metal chelating agent called HMD®.

Development of Th2 type immune responses deactivates such defences. Mercury inhibits macrophage and neutrophil defence against *Candida* by its effects on Th1 and Th2 cytokine effects. *Candida* overgrowth results in production of the highly toxic candidotoxin and ethanol which are known to cause fatigue, toxicity and depressive symptoms. Another study found such impairment of neutrophils decreases the body's ability to combat viruses such as those that cause heart damage, resulting in more inflammatory damage.

The main components of the immune system are:

B-lymphocytes: these produce proteins called immunoglobulins, which bind with antigenic substances and render them harmless. An antigen is a substance which the body recognizes as being alien and therefore potentially harmful. An immunoglobulin is a particular kind of protein which coats the antigen and by being made harmless; the antigen can then be digested by other cells.

T-lymphocytes: there are three types:

- a) The killer cells: these attack and destroy substances by using enzymes and hormones.
- b) The helper cells: these help B cells to make the immunoglobulins.
- c) The suppressor cells: these protect the body from the excesses of its defense system by opposing B-cell antibody production.

Chronic candidiasis caused by the opportunistic pathogen *Candida albicans* is characterized by a depressed cellular immune response.^{27,28} Lymphocytes from many patients with chronic candidiasis fail to proliferate in vitro in response to mitogens and/or *Candida* antigens.²⁹ In addition, a high percentage of these patients often fail to mount delayed-type hypersensitivity reactions to *Candida* antigens.³⁰ Evidence exists which suggests that the organism itself may be responsible for inducing a

27 Rogers, T.J., Balish, E. Immunity to *Candida albicans*. *Microbiol. Rev.* 44, 660, 1980.

28 Kirkpatrick, C.H. Host factors in defense against fungal infections. *Am. J. Med.* 77(D), 1, 1984.

29 Kirkpatrick, C.H., Rich, R. & Bennett, J. Chronic mucocutaneous candidiasis: model building in cellular immunity. *Ann. Int. Med.* 74, 955, 1971.

30 Cahill, L., Ainbender, E. & Glade, P. Chronic mucocutaneous candidiasis: T-cell deficiency associated with B-cell dysfunction in man. *Cell. Immunol.* 14, 215, 1974.

state of immunological non-responsiveness.³¹ It has been reported that treatment of the infection with anti-fungal agents may lead to a restoration of immune function.³² More recently, Candida-specific suppressor cells have been identified in patients with chronic candidiasis.³³ In addition, extracts of Candida have been shown to induce suppressor cell activity in normal human lymphocytes.³⁴ This Candida-associated immunosuppression may be an important factor in exacerbation of the disease.

It is largely the suppressors which are involved in fighting the Candida challenge, partly because Candida's adaptability allows it to produce disguising antigens, which deter the immune system from recognizing it as foreign and harmful. In this way the immune system may eventually become non-responsive to the presence of Candida albicans. Candida toxins will then circulate virtually unchallenged, and Candida will grow in a range of tissues either as a yeast or a mycelial fungus.

This apparent tolerance of Candida by the immune system can only be reversed in the long term by ending exposure of the body to yeast antigens and toxins. A high percentage of serum from symptomless people has been found to contain yeast toxin immunoglobulins. This indicates that the B-cell immune defenses must be constantly counteracting Candida toxins. When alive, yeasts are able to invade the immune system to a certain degree. When they are killed, proteins making up the yeast cell wall are absorbed through the lining of the intestine and can cause heightened allergic reactions, resulting in a phenomenon called 'Die off' or the 'Herxheimer reaction.'³⁵ This may in fact signal a good response to treatment.

31 Durandy, A., Fischer, A., Ledest, F., Drouhet, E. & Griscelli, C. Mannan-specific and mannan-induced T-cell suppression activity in patients with chronic mucocutaneous candidiasis. *J. Clin. Immunol.* 7, 400, 1987.

32 Budtz-Jorgensen, E. Cellular immunity in acquired candidiasis of the palate. *Scand. J. Dent. Res.* 81, 372, 1973.

33 Gupta, S. Autologous mixed lymphocyte reaction in man. XI. Deficiency of autologous mixed lymphocyte reaction and abnormalities of monoclonal antibody-defined T-cell subsets in chronic mucocutaneous candidiasis. *Scand. J. Immunol.* 21, 525, 1985.

34 Damle, N., Childs, A. & Doyle, L. Immunoregulatory T-lymphocytes in man: soluble antigen specific suppressor inducer T-lymphocytes are derived from the CD4+, CD45R-, p80+ subpopulation. *J. Immunol.* 139, 1501, 1987.

35 The Herxheimer reaction is explained in more detail later in this chapter.

The diagram below clearly shows how Candida is known to impair immune functioning by directly and negatively impacting the helper-suppressor ratio of T- lymphocytes.

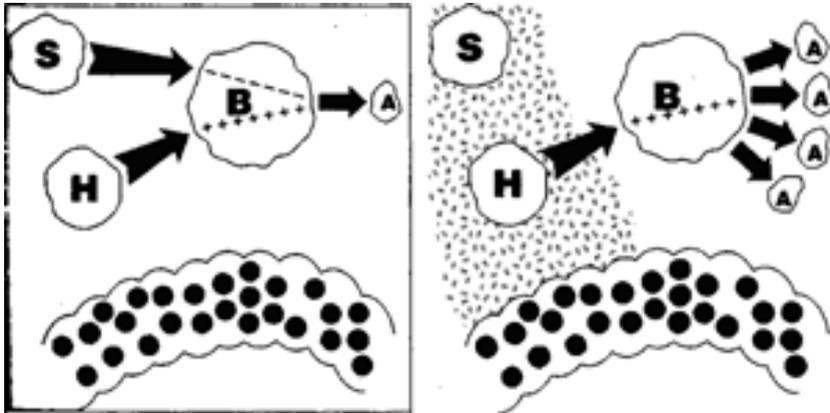


Diagram 1: How yeast toxins (black dots) injure the immune system
 S = Suppressor cell; H = Helper cell; B = B-cell; A=Antigens

First diagram: Yeast and intestinal lactobacilli bacteria in balance = normal immune function. A balance between intestinal lactobacilli bacteria and yeast allow for normal immune lymphocyte function: helper cells stimulate the B-cells to make antibodies, whereas suppressor cells appropriately oppose B-cell antibody production. Antibody production is in balance.

Second diagram: Overgrowth of intestinal yeast, release of toxins into the bloodstream, and altered immune function. Intestinal yeast overgrowth and yeast toxins released into the bloodstream inhibit suppressor cell function. Stimulation of antibody production by helper cells is now unopposed, and inappropriate antibody production occurs. Here we have a heightened state of allergy, as well as an increased susceptibility to autoimmune conditions.

Occupational exposure studies have found mercury impairs the body's ability to kill *Candida albicans* by impairment of the lytic activity of neutrophils and myeloperoxidase in workers whose mercury excretion levels are within current safety limits. Development of Th2 type immune responses deactivates such defenses. Mercury inhibits macrophage and neutrophil defense against candida by its affects on Th1 and Th2 cytokine effects. Candida overgrowth results in production of the highly toxic candidotoxin and ethanol which are known to cause fatigue, toxicity, and

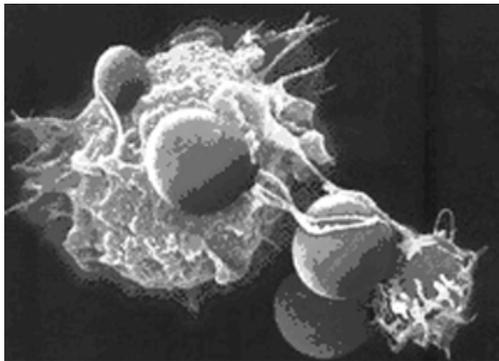
depressive symptoms. Another study found such impairment of neutrophils decreases the body's ability to combat viruses such as those that cause heart damage, resulting in more inflammatory damage.

What are the signs of Candida infection?

The result of heightened Candida overgrowth is a list of adverse symptoms of considerable length. Basically, the characteristics of Candida overgrowth fall under three categories, those affecting:

- ❖ The gastrointestinal and genitourinary tracts
- ❖ Allergic responses
- ❖ Mental/emotional manifestations.

Initially the signs will show near the sites of the original yeast colonies. Most often the first signs are seen in conditions such as nasal congestion and discharge, nasal itching, blisters in the mouth, sore or dry throat, abdominal pain, belching, bloating, heartburn, constipation, diarrhoea, rectal burning or itching, vaginal discharge, vaginal itching or burning, increasingly worsening symptoms of PMS, prostatitis, impotence, frequent urination, burning on urination, bladder infections.



White blood cell killing Candida

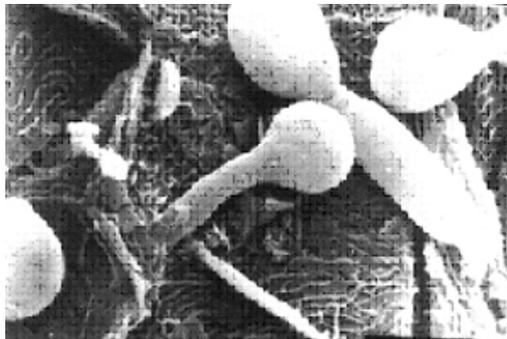
But, if the immune system remains weak long enough, Candida can spread to all parts of the body causing an additional plethora of problems such as fatigue, drowsiness, uncoordination, lack of concentration, mood swings, dizziness, headaches, bad breath, coughing, wheezing, joint swelling, arthritis, failing vision, spots in front of the eyes, ear pain, deafness, burning or tearing eyes, muscle aches, depression, irritability, sweet

cravings, increasing food and chemical sensitivities, numbness and tingling, cold hands and feet, asthma, hay fever, multiple allergies, hives and rashes, eczema, psoriasis, chronic fungal infections like athlete's foot, ringworm and fingernail/ toenail infections.

In addition, 79 different toxic products are released by *Candida*, which in itself places a considerable burden on the immune system. These get into the bloodstream and travel to all parts of the body where they may give rise to a host of adverse symptoms. As mentioned above, yeasts in the body produce a by-product called acetaldehyde, a toxic substance resulting in several health consequences. In fact, acetaldehyde is the compound that produces the symptoms in an alcohol 'hang-over.'

Molybdenum plays a role as a co-factor in helping break down acetaldehyde to a form that actually provides us with energy and also plays a large role in the detoxification pathway for acetaldehyde in the human body. There are dozens of known toxins released by yeast in the body. This damages and overworks both the liver and the immune system as the body tries to detoxify these poisons.

In *Candida* overgrowth, the yeast colonies can dig deep into intestinal walls, damaging the bowel wall in their colonization. The invasive *Candida* filaments produce disease affecting the entire body in a number of ways:³⁶



Candida penetrating human tissue

³⁶ Crandall M. The pathogenetic significance of intestinal *Candida* colonization. *Int J Hyg Environ Health* 207; 79-81, 2004.

Destruction of the intestinal membrane, allowing for:

- a) Severe leaks of toxins from activity of undesirable microorganisms within the layers of encrusted faecal matter into the bloodstream, causing a variety of symptoms and aggravating many pre-existing conditions. Under the anaerobic conditions of the colon, *Candida* itself will produce a number of toxins by fermenting sugars.
- b) Absorption of incompletely digested dietary proteins. These are extremely allergenic and may produce a large spectrum of allergic reactions. Food allergies are very common with Candidiasis, as is environmental hypersensitivity (to smoke, auto exhaust, natural gas, perfumes, air pollutants), probably due to *Candida* filaments infiltrating lung and sinus membranes.
- c) Migration of *Candida* itself into the bloodstream. Once in the blood, it has access to all body tissues and may cause various gland or organ dysfunctions, weakening the entire system and further lowering resistance to other diseases.

Candida can also attack the immune system, causing suppressor cell disease, in which the immune system produces antibodies to everything at the slightest provocation, resulting in extreme sensitivities.

Finally, *Candida* overgrowth can be dangerous if not controlled. The persistent, constant challenge to the immune system by an ever-increasing, long-term overgrowth of *Candida*, can eventually serve to wear down the immune system and cause a seriously weakened capacity for resistance to disease.

Women are more likely to get *Candida* overgrowth than are men. This is related to the female sex hormone progesterone, which is elevated in the last half of the menstrual cycle. Progesterone increases the amount of glycogen (animal starch, easily converted to sugar) in the vaginal tissues, which provides an ideal growth medium for *Candida*. Progesterone levels also elevate during pregnancy. Men are affected less frequently but are by no means invulnerable.

Recurrent vulvovaginal infections of Candidiasis can be effectively eradicated using the Davinci *Candida* Protocol (DCP) described below, along with boric acid suppositories. In one study of 100 women with chronic resistant yeast infections, who had failed extensive and prolonged

conventional therapy, were treated with 600mg boric acid vaginal suppositories twice a day for two or four weeks. This regimen was effective in curing 98% of the women who had previously failed to respond to the most commonly used antifungal agents.

Clinical effectiveness doesn't really get any better than this: The DaVinci Candida Protocol (DCP) works most of the time, it's relatively inexpensive and it's easy to use. The only down side I have observed apart for the initial die-off reactions which can be uncomfortable, is that the boric acid can cause some burning as the capsule melts. Using vitamin E oil or lanolin, or even vaseline on the external genitalia to protect it from the boric acid seems to avert any significant discomfort.

How do you know you have it?

Currently, diagnosis is primarily clinical, as well as the use of biodermal screening devices such as the VEGA EXPERT which I use in clinical practice. Since almost everyone has Candida in their bodies, tests for its presence are useless. Confirmation of overgrowth is very difficult through laboratory tests as it is difficult to culture and identify the pathogenic, mycelial form of Candida. Since what it does is to paralyze the immune system against it, allergy tests to determine the system's reaction to it are also ineffectual.

Furthermore, the results of the yeast imbalance and the combined effects of different hormones, as well as mycotoxins generated and released by the yeast into the bloodstream and the confusion created in the immune system – produces such a wide variety of symptoms, which are seemingly so unrelated (such as wheezing, depression and fungus infection under fingernails), that a definite diagnosis cannot be made from any specific pattern of signs and symptoms.

Signs and symptoms

There are a wide variety of signs and symptoms that are prevalent in Systemic Candidiasis – being able to score these systematically provides a good, overall picture. The patient's history and symptoms are usually the key to arriving at a diagnosis. Dr. Crook's Candida Questionnaire is also extremely helpful as it enables the patient to score their symptoms and arrive at a number – anything above 180 for women, and 140 for men is

highly significant and represents the majority of symptoms that relate to this condition.³⁷

Laboratory tests

Conclusive laboratory tests have not yet been developed, even though there are a number of tests appearing on the market that can help in the diagnosis of *Candida*, but they all have their advantages and disadvantages.

An easy-to-use diagnostics platform rapidly identifies *Candida* yeast species directly from positive blood cultures. The new assay, peptide nucleic acid fluorescence in situ hybridization (PNA FISH), is a highly sensitive, and specific assay that uses PNA probes to target species-specific ribosomal RNA (rRNA) in bacteria and yeasts.

Called the ‘Yeast Traffic Light,’ the assay is one of the latest molecular-based PNA FISH diagnostics platforms that provides rapid identification of bloodstream pathogens in hours instead of days. Laboratories can identify, in a single Yeast Traffic Light test, up to five *Candida* species – directly from positive blood cultures – including: *C. albicans* and/or *C. parapsilosis*, *C. tropicalis*, *C. glabrata* and/or *C. krusei* – in hours instead of days – enabling clinicians to provide early, effective and appropriate antifungal therapy for patients afflicted with Candidemia.

The results of the test indicate the yeast responsible for the infection: green fluorescing cells indicate *C. albicans* and/or *C. parapsilosis*; yellow fluorescing cells indicate *C. tropicalis* and red fluorescing cells indicate *C. glabrata* and/or *C. krusei*.

Other laboratory tests that can be used are:

CECA (CandiSphere Enzyme Immuno Assay Test) which diagnoses *Candida* by detecting antibodies against cytoplasmic proteins of the invasive fungal yeasts. This test is claimed to be 95% sensitive and 92% specific for Candidiasis.³⁸

³⁷ Please see Appendix B.

³⁸ The Chronic Candidiasis Syndrome: Intestinal *Candida* and its relation to chronic illness OAM 1996-1997, 16. Gutierrez, J; Maroto, C. et al: Circulating *Candida* antigens and

Direct stool examinations for chronic intestinal Candidiasis. A gram stain for yeast along with direct microscopic examination is a very accurate diagnostic tool for *Candida*. This method avoids quantification inaccuracies that appear with cultures.

Serum or urine Darabinitol levels³⁹. This is a *Candida* carbohydrate metabolite, which is also a neurotoxin. You may have difficulty finding a lab that will do this test.

A *Candida* culture may be considered if there is the presence of oral thrush/white coating on the tongue. Excessive growth may be an indication, especially if it increases with your symptoms. The culture may take at least a week or more to grow correctly and the sample must be taken using proper protocols.

Serum *Candida* antibody levels (IgG, IgM, and IgA). These will not be definitive since the body's ability to defend itself against *Candida* is limited due to its location in the gastrointestinal tract. Positive or negative responses are difficult to interpret. *Candida* IgE may be helpful. However, a test of IgG blood antibodies to *Candida albicans* in conjunction with a direct yeast culture stool sample evaluation is recommended.

Biodermal screening

There are other testing procedures that I use in clinical practice, but mainly bio-dermal screening, using the VEGA Biodermal screening.

When an ampoule of pathogenic *Candida* is placed in the honeycomb of the VEGA EXPERT and the probe placed on an acupoint of a finger, it is very clear when a patient 'resists' as the conductivity drops. What I have also found time and time again in over 2,000 *Candida* patients that I have tested to date, is that not only do they register positive on the VEGA to *Candida*, but also all other yeast families such as yeast, mushrooms and fermented products involving yeast such as wine, beer and vinegar products. I personally find the VEGA a very useful diagnostic device that

antibodies: useful markers of candidemia. *Journal of Clinical Microbiolog*, 31(9): 25502, 1993.

³⁹ Walsh, TJ, Lee JW et al: Serum Darabinitol measured by automated quantitative enzymatic assay for detection and therapeutic monitoring of experimental disseminated candidiasis: correlation with tissue concentrations of *Candida albicans*. *Journal of Medical & Veterinary Mycology*. 32(3):20515, 1994.

can answer a lot of questions that more traditional laboratory testing cannot.

Autonomic response testing (ART)

Another method of testing for Candida is to use a form of Kinesiological muscle testing called Autonomic Response Testing (ART) invented by a German neurologist Dr. Dietrich Klinghardt, M.D. Ph.D. Both of these tests are described in more detail in chapter 2.

The secrets to success

It is my opinion that if one wants to be successful in eradicating this pathogen, you must kill it using natural anti-fungal remedies, while at the same time cleaning up the internal milieu. One must also try to convert the pathogenic, mycelial Candida back to the normal budding yeasts – this is a **crucially important step** often missed by many practitioners of natural medicine. The only remedies that can do this successfully are the Sanum isopathic fungal remedies invented by Professor Enderlein,⁴⁰ after many years of experimentation using darkfield microscopy. See below for further details. Many physicians now believe that as an interim measure before embarking on a treatment protocol for Candida overgrowth, these remedies possess such minor risk and expense that they should be considered in any chronic illness.

One clinical trial a person may attempt is to avoid certain foods for five days which are known to facilitate the growth of yeast. Such foods include the following:

- a) **Sugar and Simple Carbohydrates** such as those found in all sweetened food, including the use of honey, molasses, sorghum, maple syrup, sugar, fructose, maltose, dextrose, corn syrup, etc.
- b) **Yeast Products** such as beer, wine, yeast leavened bread, natural B vitamins, brewer's yeast.
- c) **Fermented and Mould-Producing Foods** such as mushrooms, cheese, vinegar, mustard, ketchup, relish and other condiments made with vinegar.

40 Referred to in Chapter 2 – Live Blood Analysis.

After avoiding these foods for 5 days, try adding them back individually into the diet in large quantities. By observing how one feels while off these foods, in comparison to any adverse affects experienced when going back on the foods, one may get a clue as to any possible yeast involvement as a causative factor for any adverse symptoms.

If adverse symptoms are provoked by a return to the yeast enhancing foods, your physician may feel that there is at least a possible reason to suspect Candida overgrowth, which may then warrant more definitive action. This may not be the best method and personally I do not use it as I would use VEGA screening and ART to determine whether there is pathogenic Candidiasis, backed up by the signs and symptoms, using Dr. Crook's Candida Questionnaire (see Appendix B). However, if you are not a VEGA practitioner or use any other form of ANS testing, then this may be a good way to begin.

Having had Candida myself and spent many years trying to find a comprehensive cure for this systemic condition, I eventually discovered a successful treatment protocol which not only cured my own Candidiasis but has also helped over 2,000 patients who have been through this protocol at my DaVinci Centre. I have thus called it the DaVinci Candida Protocol (DCP). So, let us examine in more detail the premise of this protocol.

The DaVinci Candida Protocol (DCP)

I hear from practitioners and patients the same story when it comes to treating Candida – that the patient feels better initially while they are on the treatment programme, but when they complete it they find that many of the old symptoms will return after a few weeks or months. Why is this the case? In my experience, I believe that it is literally impossible to kill ALL the pathogenic Candida organisms in the body tissues and organs – remember these are the mycelial or rhizoid forms, not the normal budding forms which are asymptomatic.

As we take the various antifungal herbs, certainly some of these pathogenic forms will be killed off, but even if a small percentage were to remain – say 5% – then they would quickly proliferate as soon as we go back to a normal diet. It will only be a matter of a few weeks before symptoms return again in force. This is classically what happens with cases of vaginal thrush as well as many cases of systemic Candidiasis. I

am certain that there will be many people and practitioners who will relate to this, as I hear it often from both groups.

One of the factors that I consider unique in the DaVinci Candida Protocol, that took me more than 10 years to develop, is the use of the Sanum Isopathic remedies that can actually alter the pathogenic forms of Candida back to their normal, budding forms. This is based on the work of Prof. Enderlein many years ago, who developed what are now called the Sanum isopathic remedies, who I mentioned above.

The DaVinci Candida Protocol has five basic objectives:

1. Starve the Candida by eliminating the foods mentioned above that feed it.
2. Kill the Candida through the use of anti-Candida products mentioned below.
3. Repopulate the bowel flora with a high-potency GG-probiotic such as Culturelle that contains 30 billion live bacteria and has been well researched in university trials.
4. Regulate the dysbiosis and convert the pathological, mycelial form of Candida back to the normal form by the use of the Sanum remedies.
5. Restore biochemical balance to the body and strength to the immune system. This will allow the body once again to regain and maintain control over Candida growth by optimizing the diet – this would involve avoiding food intolerances and following the Metabolic Type Diet by Wolcott⁴¹. Also kill off other parasites using Hulda Clark's parasite cleanse⁴² or similar, and begin chelating heavy metals out of the system.

None of these objectives are mutually exclusive, nor can they be addressed in a serial way – they all need to be looked at concomitantly for the treatment protocol to be successful. Incidentally, if the DaVinci Candida Protocol is followed diligently by the patient and practitioner, the success rate of eliminating the Candida approaches 100%. It is only those very rare cases where we have a case of antifungal-resistant Candida that there is a problem – this usually happens when the patient has been treated time and time again with medicinal anti-fungals and the Candida have now become

41 For details, please refer back to the section entitled Nutritional testing for metabolic typing in chapter 2.

42 For details, please refer back to the Herbal parasite cleanse in chapter 4.

a ‘super Candida’ – this again can be eliminated using this protocol but the time required will be stretched from three months to 4-5 months. I have never had an antifungal-resistant case that was not cured in a maximum of 5 months, but as I said earlier, these are very rare occurrences.

Phase 1 - starving the candida

I have found that it is literally impossible to treat Candida if one does not cut out **ALL** forms of sugar for a period of 3 months. The foods that should be strictly **AVOIDED** during that time include:

Sugar – and all foods that contain sugar. These include white and brown sugar, honey, syrups, liquor, lactose, fructose, all confectionary and sweet cakes, chocolates, ice-creams, home-made sweets and cakes, biscuits, fizzy beverages and all fruit drinks.

Yeast – and all foods that contain yeast including breads, vinegar, ketchups, mayonnaise and pickles.

Mushrooms – all types, including Chinese mushrooms such as Shitake.

Refined Foods – all white flours, white rice, white pasta products, cornflour, custard and refined cereal products, unless they are wholemeal or organic.

Fermented Products – all alcoholic beverages, vinegar and all vinegar products such as ketchup, mayonnaise and pickles, beer.

Nuts – all types of nuts that are cleaned and packaged without their shells – these have a tendency to collect fungal spores and moulds from the atmosphere, which will antagonize the Candida. Nuts that are fresh with their shells are OK.

Fresh and Dried Fruit – all fresh fruit should be avoided for the initial **six weeks only** as again, the fructose they contain will feed the Candida and make it extremely difficult to eliminate.

All other fruit that is not fresh such as cooked, tinned or dried and fruit juices should be avoided for the full 3 months – your health practitioner will advise you when to begin eating fruit again. Obviously this includes fresh fruit juices (vegetable juices are OK), as well as marmalades. There

are book written about the “anti-Candida diet” that may be worth reading.⁴³

Phase 2 – killing the candida

There are a number of herbal formulas, homeopathics and probiotics that are used in the DaVinci Candida Protocol – they have been carefully selected after years of experimentation, and the fact that they have worked time and time again with hundreds of people. The aim of using these supplements is to kill off the Candida. Here are the supplements in order:

1. **Kandidaplex** – a doctor-formulated compound that contains Berberine, undecylenic acid, biotin, sorbic acid, citrus seed extract and Pau D’Arco. Dosage: 2 caps x 3 daily.
2. **Horopito** (practitioner-strength) – a New Zealand herbal product that contains two powerful anti-fungal agents that have been shown to kill Candida – *Pseudowintera colorata* and the synergistic herb Aniseed, that boosts effectiveness 6 fold. Dosage: 1 cap twice daily.
3. **Caprylic Acid** (600mg) – a derivative of coconut that stops the Candida reproducing, as well as killing the Candida. Dosage: 1 tab x 3 daily.
4. **Candida 30c**: homeopathic – freely available in most pharmacies. Dosage: 2 pillules or 1 cap x 3 daily for 2 weeks only. These are stopped just as the Sanum remedies are begun.

Phase 3 – repopulating the friendly bacteria

This phase runs parallel with phase 2 and uses good quality, human strain probiotics such as the high-potency GG strain of probiotics – one well-researched brand that we use is Culturelle but there are others too.

Culturelle contains 30 billion live bacteria per capsule, in order to repopulate the deficient flora of the gut. Dosage: 1 capsule per day.

To these supplements we add a good-quality multivitamin such as OPTIMUM 6 to provide all the vitamins and minerals that the immune system requires for optimal functioning.⁴⁴

43 Burton, G. *Candida Control Cookbook*. New York: NAL, 1989.

Phase 4 – using isopathic remedies to normalize pathogenic candida

All the above must be taken for the full 90 days of the protocol, with the exception of the Candida 30c. After two weeks of the anti-Candida diet, certain specialized isopathic remedies are introduced, known as Sanum remedies from Germany, after the work of Prof. Enderlein, as follows. See Table 1 regimen below. Each of these isopathic remedies is only taken a couple of times per week, as follows:

1. **Mucokehl D5 tabs** - 1 tab twice weekly.
2. **Pefrakehl D4 caps** - 1 cap twice weekly.
3. **Notakehl D5 tabs** - 1 tab twice weekly.
4. **Fortakehl D5 tabs** - 1 tab twice weekly.
5. **Nigersan D5 tabs** - 1 tab twice weekly.
6. **Albicansan D4 caps** - 1 cap every second day.

If there is vaginal discharge, or anal Candida, then vaginal or anal pessaries of Albicansan D3 must also be used to eliminate this topical infection. These can be used every second day last thing at night, after sex.

These Sanum remedies mentioned above are continued for 10 weeks until the end of the Candida protocol. It is wise to begin the Sanum remedies TWO WEEKS after beginning the general protocol in order to allow a considerable portion of the Candida to die off, and to reduce the severity of the Herxheimer reaction.

Fruit can be re-introduced back into the diet FOUR WEEKS after the beginning of the Sanum remedies.

All capsules and tablets should be taken at different times from food and should not be taken together, as they clash. Follow this simple table of how and when to take your Sanum remedies. These remedies are taken BEFORE or SEPARATE from food.

Open the capsules and pour the powder that they contain under the tongue and allow it to dissolve and absorb for a few minutes.

44 All the abovementioned supplements are available from www.worldwidehealthcenter.net (USA customers) or www.seeknatural.co.uk (UK and European customers).

Lesson B – Systemic Candidiasis

	M am	M pm	Tue a.m.	Tue p.m.	W a.m.	W p.m.	Thu a.m.	Thu p.m.	Fri a.m.	Fri p.m.	Sat a.m.	Sat p.m.	Sun a.m.	Sun p.m.
Albican	■				■				■				■	
Mucok		■					■							
Pefrake				■						■				
Nigersa						■						■		
Fortake							■							■
Notake			■								■			

Table 1 – Protocol for the Sanum Remedies

Prof. Enderlein’s Sanum remedies work by changing the harmful microorganisms in the body fluids into non-aggressive forms, probably by changing the pH and electrical conductivity⁴⁵. Harmful bacteria and toxins are broken down and excreted through natural processes. They also help to alleviate the dysbiosis and bring the internal milieu of the intestine back into balance.

Phase 5 – balancing the body chemistry

It is a commonly recognized and accepted fact that immune system efficiency is highly dependent on the proper biochemical balance in the body. This of course, is dependent on proper and adequate nutrition to supply the body with all the required biochemical constituents (vitamins, minerals, enzymes, intrinsic factors, etc).

Different people require different amounts and balances of nutrients for optimum health. The criteria for the determination of these differing nutritional requirements lies within the definition of one's metabolic type, i.e., the genetically determined metabolic and nutritional parameters that define each person's individuality on every level.

It is precisely because different people have different metabolic types, and therefore different needs for nutrition, that the allopathic, symptom-treatment approach in nutrition is baseless and so often ineffective. This further explains why what (nutritionally) helps make one person better, may have little or no effect on another, or even make a third person worse.

I have not tried to modify this protocol as I have found it to be so

⁴⁵ Georgiou, G.J. The physics behind live blood analysis and zeta potentials, *Explore!* Vol. 14, No. 5., September 2005.

successful in the treatment of over 1,500 patients to date, that I dare not juggle with it in case it loses its effectiveness. I'm sure that it can be improved upon, and would welcome comments from other practitioners working with Candida. It is only through sharing that we will grow and become better practitioners.^{46, 47}

Herxheimer reactions

Depending on the severity of Candida overgrowth and the amount of the agents taken, the Candida can be killed off in vast numbers in a very short period of time. As they are killed, they release substances that are toxic to the body – these are called mycotoxins. If the elimination organs such as the kidneys, liver, lymphatics, gut and skin cannot clear these mycotoxins quickly and they accumulate in the tissues, then a temporary toxic or allergic-type reaction can occur. The technical name for this experience is a Herxheimer reaction but it is more commonly referred to as 'die off.'

Usually die-off lasts only a few hours, though it can last several days. It can usually be controlled by reducing the dosage of the remedies used to kill the Candida, as well as taking drainage herbs and homeopathics that your practitioner will advise you on.

Signs of Herxheimer reaction can be many and varied but generally involve such discomfort as aching, bloating, dizziness, nausea, and overall 'goopy sick' feeling, or a worsening of original symptoms. Fortunately, die-off is generally short in duration, and although uncomfortable, is at least a confirmation of the presence of Candida and that something 'good' is happening.

Exercise as well as insuring proper, daily bowel evacuation has been reported as being helpful in countering the adversities of die-off. Maintaining a high daily intake of pure water is also important to keep the channels of elimination open. Sometimes taking a teaspoon of baking soda (sodium bicarbonate) in a glass of water can help to quickly neutralize acidic reactions in the body that lead to inflammation and pain.

46 Georgiou, G.J. Scourge of the 21st Century: Systemic Candidiasis – (Part 1). *British Naturopathic Journal*, Vol. 25, No. 1, 2008.

47 Georgiou, G.J. Treatment of Systemic Candidiasis – (Part 2). *British Naturopathic Journal*, Vol. 25, No. 1, 2008.

It may be possible to slow down these symptoms, many of which are caused by acetaldehyde, one of the main toxins produced by yeast. Taking Molybdenum can break down this toxin into something far less harmful. From examining the biochemical pathway of Acetaldehyde into acetic acid, (Threonine to acetaldehyde to acetic acid to acetyl coenzyme A), both Niacine amide (NAD) and aldehyde oxidase are required for these chemical pathways. Both of these are dependent on certain nutrients such as riboflavin, iron, and molybdenum – it may be worth considering adding these to the Candida protocol if Herxheimer reactions are bad.

Case studies

There is still a lot of controversy surrounding the topic of Candida, and I am the first to agree that we do not have all the answers. One thing that I have witnessed in clinical practice, however, is the astounding recovery that many of these so-called Candidiasis patients make when placed on the DaVinci Candida Protocol (DCP).

Personally, I have seen many different skin problems clear when the systemic Candidiasis is treated, including: psoriasis, as well as chronic sinusitis, joint pains, cheloid or scar formations, cracked hands, chronic coughs and sore throats of many years standing, chronic thrush and vaginal discharge, headaches and migraines, chronic fatigue or myalgic encephalomyelitis (ME) and many other rather atypical symptoms that were labelled as ‘Idiopathic’ which basically means ‘unknown aetiology.’ Here are a few case histories for your interest.

Case 1 – This is the case of a woman who went in for a D & C scrape of the uterus. During the surgery, the gynaecologist ruptured the uterus and she required emergency surgery due to heavy internal haemorrhage. During that time, she received a number of IV antibiotics and a couple of months after being discharged, she suffered from splitting hands along with chronic thrush, fatigue and other skin rashes of unknown origin. She made a dramatic improvement in all of these symptoms after completing the DaVinci Candida Protocol.

Lesson B – Systemic Candidiasis



Case 1: Bad case of splitting hands after IV antibiotics



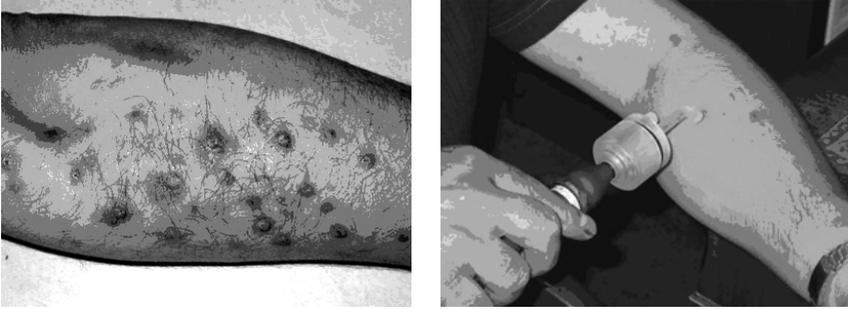
Case 1: Two months into the DaVinci Candida Treatment

Case 2 – This is a lady who had suffered from chronic psoriasis for over 20 years – this had spread to most of her torso as well as the limbs. One of the underlying problems of the skin problem was systemic Candidiasis, which cleared after three months of the DaVinci Candida Protocol.



Case 2: Chronic psoriasis (left) and 3 months after completion of DaVinci Candida Treatment

Case 3 - A complex case of an idiopathic skin problem of 20 years' duration. Using the Candida Treatment Protocol resulted in over 75% improvement, but there was a bacterial element that needed further treatment to completely eliminate it



Case 3: Idiopathic skin problems of 20 years' duration (left) and after treatment (right)