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# **Cell wall deficient forms of candida**

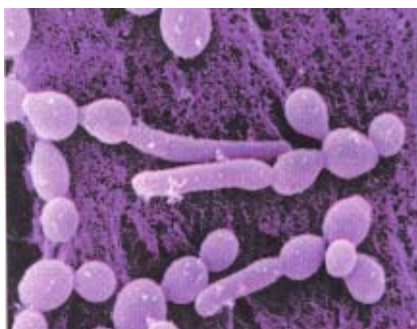
**How they occur, their significance  
and how to regulate them using naturopathic  
methods**

**by  
Dr. Peter Schneider**

In a similar way to bacteria (see the article „SANUKEHL remedies for the excretion of cell wall deficient forms of bacteria – a specific extension of isopathic therapy“ in SANUM Post No. 54, 2001), yeasts too can exist in cell wall deficient (CWD) forms. In these forms there is no cell wall but only a cell membrane. Such forms are of particular importance for candida, as these yeasts can also be pathogenic in candida mycoses in the CWD form and the immune system can no longer recognise or remove the organisms adequately.

However, the development and reproduction of the cell wall deficient forms of bacteria and candida occur under completely different conditions. Whilst bacteria need very energy-rich environmental conditions to be able to live as CWD within erythrocytes or leucocytes, cell wall deficient forms of candida arise primarily as „stealth forms“ under conditions of general or localised lack of energy (Mattman, 2001). Even after colour stains (brilliant green) or antimycotics have been added to a culture, candida grows only as a cell wall deficient form. The following illustrations show on the left an electron microscope photograph of candida (magnified 9480 times) and on the right the growth of transitional forms of candida from the original thin filaments in a culture with brilliant green (magnified 1000 times; Mattman, 2001). The yeasts on the right hand picture are hardly recognisable as such.

Even back in 1956 investigations in Hungary had shown that brewer's yeasts (*Saccharomyces*

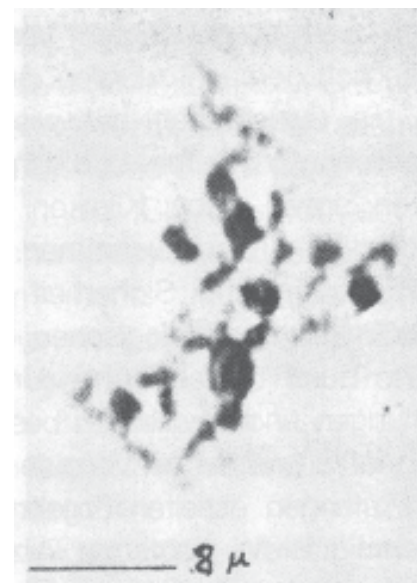


*cerevisiae*) can grow in cell wall deficient forms. Later it was recognised that in about 50% of cases candida too can grow spontaneously as CWD in synthetic culture mediums in the laboratory. However, if blood serum is added to the synthetic mediums, cell wall deficient forms of candida can no longer be detected. As a result of the serum, sufficient protein and energy once again becomes available to the yeasts so that they are able to reproduce in the classic form with cell walls.

Candida are pathogenic not only in their classic yeast forms but also as CWD. If CWD candida is injected into laboratory animals, the result is very serious systemic candidiasis with endocarditis and mycohaemia (Mattman, 2001).

The following table shows the energetic relationships as calculated about 50 years ago by the French hydrologist Claude Vincent in his description of milieu relationships (BEV) in times of health and illness (from Elmau, 1985):

Ideal values					
	pH	rH <sub>2</sub>	E	r	Result (µW/cm <sup>2</sup> )
Blood	7.10	22	234	210	261
Saliva	6.50	22	270	140	521
Urine	6.80	24	312	30	3245
Strongly pathological values					
	pH	rH <sub>2</sub>	E	r	Result (µW/cm <sup>2</sup> )
Blood	7.50	25	300	121	744
Saliva	7.25	26	345	310	284
Urine	4.80	19	282	127	626



As this examination of the energy shows, a great deal of energy is used in a healthy metabolism (upper part of the table), however most of this is excreted again in the urine.

In a metabolism which is altered as a result of illness (lower part of the table), a great deal of energy is stored in the blood (Enderlein called this a „tendency towards congestion“). This lapse is essentially characterised by a rise in the redox potential („redox rigidity“), the cause of which lies in a disturbance of the cell respiration. At the same time the metabolism is so strongly affected in the area of the connective tissue and the excretory organs that the energy of the blood can no longer be utilised. As a result the acid-base balance of the connective tissue shifts and



becomes more acid, whilst to compensate the pH of the blood rises as a result of the mobilisation of the alkali reserves. As the renal function also becomes weaker and weaker, less and less minerals are excreted, and this leads to an increase in the concentration of minerals and thus also in the conductivity of the blood. For this reason chronically ill patients are positively starving whilst at the same time there is excess energy in their blood. The energy-rich milieu conditions of the blood are ideal conditions for the reproduction of cell wall deficient forms of bacteria and viruses, but not for candida.

**Some major causes of the development of candida mycoses**

Cell wall deficient forms of candida can reproduce particularly well in those organs which have a poor supply of energy or in which the energy metabolism is badly disrupted. Consequently there is a predilection for CWD like this to develop in the bowel, which nowadays (according to Werthmann) is the main „weak organ“ within the human body. Vaginal mycoses can occur in isolation or together with intestinal mycoses, and they often point to a situation where there is a lack of

energy (partner problems) in this area.

Local candida mycoses can be found just as frequently. They occur where there is a lack of energy in the local area, e.g. because of a blockade of a meridian. So, for example, mycoses of the big toenail are often seen in disorders of the spleen-pancreas meridian.

The long-term use of medication such as antibiotics and corticosteroids can also change the energy in the milieu so strongly by inducing a redox blockade that this provides the appropriate conditions for the candida to reproduce.

Nowadays emotional and dynamic blockades are the main causes of meridian disorders. In particular, emotional blockades are frequently not taken sufficiently into account, although in the meantime they have become important factors in today's living and working conditions. At the same time it is primarily those meridians which have a direct connection to Gaia, Mother Earth, which are affected, namely stomach-spleen/pancreas (earth) and kidneys-bladder (water).

Whilst (according to Dr. Rau) emotional blockades of the stomach

meridian are strongly linked to an excess of energy and unresolved problems with the parent of the opposite sex, because of the function of the spleen as the entrance portal into the body for vital energy, the spleen-pancreas meridian has a connection to the energy which is taken in through nutrition, air, water and one's environment. In a similar way, the energy which is given to a new-born infant on its path through life („original chi“ or „prenatal chi“) has a connection to the kidneys-bladder meridian.

Sexual problems are often linked to blockades of these two pairs of meridians.

According to psychokinesiology (Klinghardt, 1999), the following emotional relationships result from these meridians:

Other important causes of the blockade of energy in the energy metabolism are disorders of the bowel and teeth. The wrong type of diet or lack of food can lead to failure in the function of the bowel and mucous membranes (Werthmann, 1998).

Progressive destruction of the mucous membrane with dysbiosis of the micro-organisms can lead in the

Earth	
<i>Spleen / pancreas</i>	<i>Stomach</i>
<p><i>Low self-esteem</i> Self-punishment, over-anxiousness and dependency, living through others, "not good enough", not being able to disassociate oneself, feeling oneself to be disapproved of, not being able to part with things</p>	<p><i>Not wanting to do anything</i> Helpless, broken spirit, overburdened, overtaxed, resentful, hating, unenthusiastic, disinclined, obsessed, not being able to process ("digest") things, "Something's preying on my mind"</p>



Water	
<i>Kidneys</i>	<i>Sexual organs / bladder</i>
<p><i>Fear</i> Feeling of guilt, powerlessness, demoralised, egoistic, disappointment, brutal and lacking in sympathy, scared, hurt, "Things are getting me down"</p>	<p><i>Being ashamed</i> A paralysed will, unfulfilled longing for love, feeling hurt, impatience, self-pity, fear of standing on one's own feet, being offended</p>

end to „leaky gut syndrome“. This means that the intestinal mucous membrane becomes permeable, allowing chemicals, bacteria, fungi and parasites to pass through, and can no longer reabsorb or excrete sufficiently. Alongside emotional causes, it is above all a diet which includes proteins from cow's milk and hens' eggs which initially leads to chronic inflammation of the mucous membranes and finally afterwards to degeneration (atrophy). As the greater part of the immunologically active tissue is to be found in the area of the intestine, a chronic functional disorder of the intestinal mucous membrane always results in trouble with the immune function.

The energy meridians which supply the stomach and bowel also have a strong link with the teeth, particularly the molars (teeth nos. 5 to 7). If these meridians are blocked by dead teeth, root treatments or dental granuloma, this has a direct effect on the supply of energy to the internal organs.

One other very important influence on the teeth comes from pollution with heavy metals from dental fillings. In this way mercury can be deposited in the cells of the nervous system, the kidneys and also the large intestine, and there it blocks

important mechanisms in the energy metabolism. Therefore the homeopathic remedy picture of Mercurius also shows links with those organs named above in particular.

Exposure to heavy metals is often a problem in children, as they can be passed on by the mother through the placenta or in the mother's milk.

#### **Conventional therapy with antimycotics**

Antimycotics are prescribed systemically or locally for the conventional treatment of candida mycoses. Antimycotics work primarily as fungistatics and to a lesser extent as fungicides.

Broad spectrum antimycotics such as nystatin or amphotericin B react with sterins in the cell membrane of yeasts. Consequently the molecules are arranged in water-filled channels, and there follows a loss of sugars, ions, amino acids, nucleic acids, etc. This mechanism explains the selective effect of these antimycotics on yeasts and fungi, as the membrane of human and animal cells contains cholesterol but no sterins.

Imidazol derivatives such as clotrimazol work as fungistatics or fungicides by restricting the conversion of lanosterol to

ergosterol (an important part of the cell membrane) and cause damage directly to the cell wall.

Consequently the effect of antimycotics is primarily not to kill off the candida but to convert the form of candida with cell walls into a low-energy CWD form. However, as important mechanisms of the immune system are directed towards the cell wall of microorganisms, the use of antimycotics means that the candida which are still pathogenic can still be recognised by the immune system, although only in a limited way. Therefore a course of therapy with antimycotics can actually relieve the strain on the metabolism and improve the clinical symptoms, but at the same time it does not rectify the shift in the milieu.

Where the intestinal mucous membrane is intact, antimycotics which have been taken orally are not reabsorbed from the intestine. However, this mucous membrane is very permeable in chronically ill patients who have candida mycosis. As a result, in patients like this, antimycotics can strengthen the metabolism blockages and weaknesses which are present anyway. This means that the use of antimycotics can lead to irreversible damage to the lysosomal



membranes in the renal tubular cells, suppression of the bone marrow, nausea, high temperature, shivering fits and anaphylactoid reactions, or even in rare cases to neurotoxic and hepatotoxic effects.

Therefore antimycotics should only be used in emergency, e.g. for systemic mycoses. Finally the damage caused by this treatment should be remedied using naturopathic methods.

### **The relationship between candida and heavy metals**

Candida has a very close relationship to exposure to heavy metals (Rau, 1998): on the one hand, heavy metals block cell respiration so that the milieu becomes low in energy and yeasts are easily able to multiply in it; on the other hand, candida bonds with heavy metals and excretes them from the body. In the process, the heavy metals form a chelation with particular peptides (2 - 11 amino acids) which are known as „phytochelatins“ and which are to be found not only in candida but also in algae, lichens and many plants. Therefore remedies made from these plants (e.g. USNEABASAN, LUFFASAN) are also used to promote the excretion of heavy metals .

If, however, candida mycoses are treated with antimycotics, it follows that not only the cell wall synthesis but also the amino acid metabolism in the yeasts is hindered. As a result, their ability to excrete heavy metals is greatly reduced.

### **Treating candida mycoses with SANUM remedies**

A course of treatment of mycoses with SANUM products is very successful as long as the metabolism is also able to implement this regulation. As a result of the therapy, fungi and yeasts are broken down and excreted from the body. However, as cell wall deficient forms of candida need a milieu which is very low in energy in order to reproduce, a successful course of therapy usually also requires a form of energy treatment.

The treatment of candida mycoses in adults using SANUM remedies includes the following:

➤ A SANUM excretion cure designed to promote the excretion of the waste products of metabolism, toxins and heavy metals:

From Monday to Friday: 5-10 drops of USNEABASAN alternating on a daily basis with OKOUBASAN 2X, to be taken in the morning;  
Saturday and Sunday: 1-2 tablets of LUFFASAN 4X each day (see also SANUM Post No. 54, 2001, page 18); plus from the start 1 capsule of MAPURIT at midday and 12 drops of ZINKOKEHL 3X in the evening.

This excretion must take place over a longer period of several weeks to months; at the same time the metabolism for magnesium and zinc is regulated. As this excretion functions very

efficiently, low doses of the remedies LUFFASAN and USNEABASAN should be taken to begin with. In addition, to promote excretion, the patient should keep to a diet as recommended by Werthmann with no milk, eggs or pork. Excretion can also be improved by drinking large amounts of good water each day; the energy level of this water should be enriched by the use of a HAKAKEHL-Plus energy plate (lay the plate under the water with the printed side uppermost).

- Correction of the milieu:  
1 measuring spoonful of ALKALAN in the morning; 60 drops of SANUVIS 3 times a day, alternating on a daily basis with 10 drops of CITROKEHL 3 times a day.
- Isopathic breakdown of forms of candida with cell walls:  
1 EXMYKEHL 3X suppository per rectum (even in cases of vaginal mycoses) in the evening; for vaginal mycoses additionally promote the circulation in the pelvic region e.g. by hot foot baths.
- Specific immune stimulation with SANUKEHL Cand (this preparation stimulates the immune system specifically against cell wall deficient forms of candida):  
Take 4 drops of SANUKEHL Cand 6X drops and rub 4 drops into the inside of the elbow each evening.



➤ „Capsule cure“ for general modulation of the immune system:

1 capsule of alternately LATENSIN, RECARCIN or UTILIN to be taken once each week.

In children this course of therapy is carried out in a simpler form because they are better able to regulate:

- Take FORTAKEHL 5X drops, PEFRAKEHL 5X drops and ALBICANSAN 5X drops alternating on a weekly basis, the dose being the number of drops equal to the number of years of age, with the adult dose of 8 drops being given from age 8 onwards.
- 1-2 drops of RECARCIN N and UTILIN N alternating on a daily basis, rubbed into the inside elbow.
- Diet according to Dr. Werthmann with no cow's milk, hens' eggs or pork; drink good water, possibly energised with HAKAKEHL-Plus energy plates.

In general, medicinal excretion therapy should not be carried out on pregnant and breastfeeding mothers. In children, because of the stage of maturity of their central nervous system, medicinal excretion of heavy metals should, where possible, not be carried out before their 8<sup>th</sup> birthday and preferably only when they reach their teens.

Both children and adults should continue with Dr. Werthmann's diet for a period of at least three months. Refined sugar should also be excluded from the diet. A diet which is totally free of sugar is not advisable, as otherwise the candida will take its nutrition from the carbohydrates in the cells of the mucous membrane.

The therapy is most effective when combined with holistic methods to remove emotional and energy blockades of the meridians (e.g. holistic dentistry, psychokinesiology, acupuncture, acupuncture massage and classical homeopathy).

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