

a potassium problem. Use of a mixture of NaCl/KCl in place of table salt may restore balance. Kelp provides a rich source of both iodine and potassium, as well as other minerals; however, it is also high in sodium and is contraindicated if hypertension is present. Kyloric garlic has been found to be effective in killing Candida albicans.

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## RESULTS

The results of this treatment can be quite dramatic. If the diet is followed strictly (food choice, not calories being important), 10 to 15 lbs. may be lost in the first two weeks, with relief from other symptoms. This initial dramatic loss, which is primarily retained water, will be followed by a gradual and sustained weight loss with improved skin and muscle tone, as long as the full treatment is followed. It may take six months to two years to clear the infection, depending on the severity of the case. If withdrawal of the drug allows symptoms to return, treatment should be continued. Indications are that diet remains important. If the patient returns to a diet high in sugar, symptoms will also return.

## PATHOLOGICAL CAUSES

If the patient does not lose weight during the first two weeks of therapy, it is likely that there are a number of food allergies. Some of the most common allergens include: milk, wheat, corn, soy, caffeine, chocolate, and members of the nightshade family: potato, tomato, peppers, and tobacco. Food sensitivities do not show in scratch tests.

For one week, known and suspected allergens should be strictly avoided. During this period, resting pulse rate should be established by taking the pulse when you first awaken in the morning. After a week of avoidance, suspected foods are then introduced one at a time. To avoid confusion, attention should be paid to the form in which the food is reintroduced. For instance, in testing for wheat allergy, cream of wheat is more satisfactory than bread since bread contains yeast, sugar and other ingredients. Do not add milk unless you have already proved that milk produces no adverse effects.

To do the test, measure the pulse rate about 15 minutes before eating the suspected food and at three 15 minute intervals after eating. It is best to remain seated and relaxed during this period. A rise in pulse rate of more than six points is significant. Increases of 30 or more points are uncommon. However, with such a strong reaction you may have to wait for several days for the pulse rate to return to normal before testing another food.

## SUMMARY

Overgrowth of Candida albicans is a severe debilitating condition affecting large numbers of people. It can be treated by a combination of diet, nystatin, acidophilus and nutritional supplements. None of the four is as effective alone as the four together. If prompt relief of symptoms is not obtained (within two weeks) the possibility of food allergies should be explored before assuming that the treatment is not affective. Indications are that four to six months of treatments with nystatin is the minimum that can be expected. Nystatin can be discontinued when discontinuance does not allow symptoms to return. In severe cases, 24 months is the length of treatment to be expected. When the population of Candida albicans is sufficiently depleted, control of symptoms can be maintained with diet and acidophilus. The level of nutritional supplements should be checked at six month intervals.

As general health improves, allergies will subside. Maintaining a four day rotation diet and gradually reintroducing foods is the wisest course of action.

If antibiotic therapy is required at any time in the future, it should be accompanied by nystatin and acidophilus. However, once the immune system has recovered, the combination of diet and supplements maintain a very high resistance to infection.

# coping with candida albicans

prepared for: \_\_\_\_\_

date: \_\_\_\_\_

## INTRODUCTION

Yeast infection can lead to an incredibly wide variety of symptoms. In the mouth, it causes coated tongue and white spots on the gums and in the corners of the mouth. In the esophagus, it causes heart burn and sour stomach. In the bowel, it causes diarrhea, rectal itching, and abdominal discomfort. Vaginitis, endometriosis and a host of premenstrual symptoms are common in women with the condition, as is wide fluctuation of weight during the menstrual cycle.

Allergic reactions such as hay fever, sinus problems, asthma, and hives are often present. Migraine headaches are common.

Perhaps most distressing are symptoms of extreme lethargy, depression, explosive irritability, vertigo, clumsiness, blurred vision, and hearing loss. Such symptoms may appear together or separately. They may appear and disappear for no apparent reason. Many of these symptoms are associated with other conditions or disease states, so several specialists may test the patient, and none find anything markedly abnormal. It is not uncommon for the patient to be told, "It is all in your head," or "You will just have to put up with it."

However, it is not in your head. The condition can be treated. Relief of symptoms occurs quite quickly - normally within two weeks. Diet is extremely important. For the first few months total avoidance of alcohol, sugar and other concentrated carbohydrates is mandatory.

## CAUSES & CONSEQUENCES

Overgrowth of *Candida albicans*, and the health problems that result from that growth, has become epidemic in North America. Typically it is an iatrogenic condition produced by overuse of antibiotic and/or steroids and aggravated by a diet high in sugar and refined carbohydrates. Of the antibiotics, the broad spectrum variety (such as the tetracyclines) are the most likely to cause problems. The pill, repeated pregnancy, estrogen replacement therapy, and steroid therapy provide conditions for rapid growth of *Candida*. The condition can be sexually transmitted; if the wife has it, the husband likely has it, too.

Symptoms vary widely from one individual to another, depending on genetic makeup and personal medical history. Within the family, husband and wife generally show different symptoms; however, children may have symptoms in common with one or the other parent.

The underlying mechanism appears to be the following. Growth of *Candida* makes very strong demands on the available supplies of B-vitamins and minerals in the host. The vitamins B12, folic acid and B6 are specifically depleted. Amino acid biosynthesis is impaired. Those nonessential amino acids synthesized via the citric acid cycle are particularly affected (including glutamine, glutamate, and asparagine). Ethanolamine levels are elevated, but phosphoethanolamines are low; however, these levels return to normal on treatment. (Levels of these amino acids can be determined in an amino acid analysis of a 24-hour urine sample.) Impaired protein synthesis will manifest itself as poor muscle and skin tone—even in people who exercise often. However, enzymes are also composed of amino acids, and some enzyme systems shut down—either because the enzymes themselves are not being synthesized, or because the required substrates are not present.

*Candida* also impairs fatty acid synthesis. Depressed levels of long chain fatty acids of the omega six series accompany high levels of the precursors. This has consequences in terms of the nerve sheath, cell membranes, etc. There is some evidence that multiple sclerosis, lupus, arthritis and some forms of diabetes have their origins in Candidiasis. It is tempting to speculate that disruption of membranes causes previously hidden antigens to be exposed, thus provoking an autoimmune response.

*Candida* often seriously impairs digestion. Food and mold sensitivities are common. Persistent weight problems that do not respond to normal diet therapy are virtually ubiquitous. A whole variety of premenstrual symptoms are encountered. These are to be expected since hormone levels rise with ovulation and remain elevated until the period has passed. If further provoked by poor food choice, general bitchiness can be replaced by rage.

The treatment that we have found most effective is a four-pronged one: strict diet, nystatin, acidophilus, and strong nutritional support.

## DIET

Diet is extremely important. All foods that will encourage yeast growth must be avoided. All foods to which the patient has developed sensitivities must be avoided for at least three weeks, and then reintroduced cautiously, and not eaten more frequently than once in four days. Often there is a drastic change in diet: absolutely no sugar, no bread nor other yeast-containing foods, no wine, no beer, no alcohol. Mushrooms and sprouts are taboo. Coffee, teas and even herb teas tend to be contaminated with molds and are to be avoided. Peanuts and other nuts are generally moldy and hence must be eliminated. Sweet fruits, milk,

cheese and starchy vegetables such as yams and broad beans yield enough glucose to feed *Candida*. Any meat likely to have residues of hormones or antibiotics should be avoided. This eliminates beef, chicken and eggs, unless you know their source and how they are raised.

So what is left? Nearly all of the salad vegetables are allowed, including cabbage, cauliflower, broccoli. Baked potatoes are allowed, if you eat the skin and throw away the inside. Carrots, turnips, peppers, onions, garlic are tasty additions to any meal. Lamb, goat and fish provide protein (however, if digestion is impaired, it may be necessary to take some digestive aid such as glutamic acid hydrochloride or digestive enzymes to digest the protein reintroduced gradually. Wheat and corn are two of the most common allergens, and should be avoided. Sour apples such as Granny Smith and Macintosh, pineapple and some berries may be well tolerated. Yogurt is often a staple in an anti-*Candida* diet.

Patients tend to crave foods that contain yeast. Bread, beer, wines all contain yeast and are among the most longed-for foods. Chocolates and sweet fruits are next on the list. These cravings generally subside in the 7th to the 10th day on the diet. By the 5th day, however, most patients would kill for a mere slice of bread!

It is extremely important that patients carry foods that they can snack on. Carrots, sour apples, and sunflower seeds are among the most helpful. Patients who do not eat something when hungry often go into "forage mode". One begins to prow and hunt for food and does not stop until finding some. However, what is found may not be on the diet.

For the first few weeks, count on eating large quantities of permitted foods. Again, always carry snacks with you.

## NYSTATIN

Nystatin is the drug of choice for dealing with *Candida*. It is very poorly absorbed from the gut, and therefore cannot effect other organs. Nystatin acts by forming a pore on the wall of the yeast cell. The metabolic products that normally remain inside the cell seep out and have to be detoxified. This die-off reaction can produce unpleasant side effects such as headache, nausea, hives, and/or diarrhea. The diarrhea can generally be controlled by adjusting the dose. The dose we recommend is 1.5 million units of nystatin in capsule form twice per day. The tablets have a much lower dose and are not so versatile. The powder can be used as a douche; for the upper G.I. tract, the contents of the capsule can be dumped on the tongue, swished around in the mouth with water and swallowed (it tastes awful). For sinus problems, dump the contents of one of the caps into the bottle; when you take your normal dose twice a day, shake up the bottle and sniff the dust gently.

## ACIDOPHILUS

It is also important to take lots of acidophilus. This is a friendly bacterium that lives in the gut and provides many vitamin B-complex factors. It is also the bacterium responsible for yogurt and some other fermented products. It is available in capsules, powders, or as a liquid. This is an extremely labile product and must be stored in a refrigerator.

There are three major inhabitants of the gut: lactoform bacteria, coliform bacteria and yeast. For good health and good digestion, the population of lactoform bacteria should be in the majority. Unfortunately, this population is the most fragile and is most likely to be wiped out by antibiotics, or by competition with the other two colonies.

## NUTRITIONAL SUPPLEMENTS

The recommended daily allowance of vitamins and minerals was devised as an acceptable level that would keep a healthy person healthy. We have found that healthy people with a good diet, including plenty of whole grains, raw vegetables and fruits and an activity level high enough to support a calorie intake of 3000 cal. per day, do not require supplements. However, with a calorie intake of 1500 cal. per day (typical for a sedentary woman in the 120-130 pound range), even with bizarre food choices, it is not possible to get the recommended daily allowance of all essential nutrients. For people with *Candida*, digestion is impaired; but the living and the dead yeast cells place toxic stress on the body; some nutrients are specifically depleted. In these circumstances, supplements are very important.

The basis for the nutritional supplement program should be a good multiple-vitamin - multiple-mineral. There are no products on the market with no yeast, no corn, no sugar, no soy, no wheat, no starch, no preservatives, and no color. In addition, fairly high levels of iodine (to support the thyroid), selenium (for detoxification and support of the immune system) and vitamins A and C are required. We recommend weekly injections of B12 and daily supplement of folic acid in addition to a good multiple B vitamin. Slow wound healing and impaired sense of taste and smell may indicate that extra zinc is required. If the victim is a woman over thirty, extra calcium and magnesium are likely needed. The elimination of oranges and bananas from the diet may cause