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Adverse Reactions to Foods and Chemicals

Immunological Problems Related to *Candida Albicans*

William G. Crook, M.D., Editor



A CSF Publication

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These letters appeared in the Journal of Orthomolecular Psychiatry, Volume 12, Number 1. We reprint them here as background for the material that follows.

To the Editor,

I'm writing to respond to your invitation which appeared in the Fourth Quarter 1981 edition of the **Journal of Orthomolecular Psychiatry** in regard to the use of the anti-yeast program developed by Dr. Truss.

I first became aware of Dr. Truss' work in the fall of 1979. Soon thereafter, I prescribed a mold-free, low-carbohydrate diet and nystatin for one of my adult patients with chronic urticaria. This patient was absolutely "desperate."

She had been seen by many, many physicians, including consulting allergists in two university medical centers. Moreover, I had struggled to help her using various means at my disposal for over a year. Nothing worked. And she required two injections of Susphrine® each day to control her hives, along with other medications by mouth, including Atarax®.

In addition to her chronic hives, she suffered from a number of mental and nervous system symptoms, including depressions, fatigue and irrational behavior.

At one visit, her husband took me aside and said, in effect, "Doctor, I'm afraid my wife is losing her mind and I feel we should consider sending her to Western State (a regional mental hospital for the State of Tennessee)."

Six days after being put on the Truss program, the hives began to improve. Improvement in the hives and her symptoms, including her mental and nervous system symptoms, rhinitis and headache, continued over the succeeding months. In a year she was "well." No hives, no significant mental symptoms. Now she's working full time in a department store.

Concurrent with the management of this first case, I began to look for other patients, especially adults, who gave a history of:

1. Multiple antibiotic drugs ... especially tetracycline, Amoxicillin®, Ceclor®, Flex® and Septra®.

History of using birth control pills ... especially for prolonged periods of time ... history of symptoms involving the reproductive organs, especially persistent or recurrent vaginitis.

3. Digestive symptoms, especially severe constipation, alternating at times with diarrhea.

4. Peculiar mental and nervous system symptoms, including not only depressions, but incoordination and feelings of unreality.

Within a few months, I had treated and helped some 20 patients with the "candida problem." I presented my findings to my peers at Medical Staff Rounds at the Jackson-Madison County General Hospital in May, 1980.

During the past two years, my interest in the role of candida and human illness has increased rapidly and I've now seen, treated and helped over 400 patients, mostly adult females in the 20 to 35 year age range. However, I hasten to point out that patients of any age can suffer from candida related illness. Moreover, as Truss has pointed out, males may also suffer from this disorder. However, males appear to develop the candida problem less frequently because they aren't subject to pregnancy, birth control pills and recurrent urinary tract infections.

Some two years ago, Dr. Robert Owen, an Otolaryngologist of Nashville, Tennessee, who first alerted me to Dr. Truss' work and who subsequently has published a paper on candidiasis and its relationship to human illness, commented, "It seems to me that the prolonged use of broad-spectrum antibiotics in children with recurrent ear troubles may affect their immune systems. Certainly, if broad-spectrum antibiotics stimulate the growth of candida in adults and such adults develop immune system problems, it's reasonable to suppose that children may also suffer from health problems related to candida."

In his continuing discussion, Dr. Owen said, in effect, "The problem of recurrent serous otitis media and other related ear problems is one of the most difficult problems facing parents of young children, pediatricians, family physicians and otolaryngologists. Although antibiotics may temporarily control ear infections and the insertion of tubes may help relieve the problem in some patients, the ear disease 'epidemic' continues throughout America."

Parenthetically, at a meeting of the Society for Clinical Ecology in New York, in a presentation entitled, "Serous otitis: Are Tubes The Answer?," George Shambaugh, M.D. commented: "There is no question of the usefulness of ventilating tubes for O.M.E. They equalize air pressure on both sides of the tympanic membrane thus allowing the fluid to resorb or be expelled by ciliary action through the eustachian tube. The only question is whether O.M.E. can be controlled by means other than surgery."

Dr. Shambaugh then reviewed his experiences in a study of over 100 children with recurrent ear problems and concluded, "...O.M.E. in children is very often, contra to recent literature, of allergic origin. With allergic management at least seventy-five percent can be controlled without surgery."

I do not know at this time whether putting young children with ear problems on the Truss program will help lessen the incidence of recurrent ear problems. However, based on my experience in adults, I feel it is a reasonable therapeutic approach to a problem which isn't responding to conventional medical and surgical management.

Here's more about the possible relationship of antibiotics not only to recurrent ear problems and other health problems in children, but also the possible relationship of antibiotics and candida colonization to severe mental and nervous system symptoms in children.

In December, 1981, the mother of a 6-year old, Middle-Tennessee child consulted me because of developmental problems experienced by her child. This youngster had been examined by a number of different physicians, including a specialist at a university medical center, and a diagnosis had been made of "pervasive developmental disorder with autistic-type behavior."

Because the child gave a history of persistent rhinitis, recurrent ear problems and therapy with antibiotic drugs, I suspected multiple food allergies and placed him on the "cave man diet" for a period of a week. This diet eliminates any and every food a person eats as often as once a week. Instructions for carrying out the diet are described in detail in the book, **Tracking Down Hidden Food Allergy** (pages 25-38, and 45-55). I instructed the mother to return the eliminated foods, one food per meal, if and when the child showed a significant improvement in his symptoms lasting 48-hours.

In less than a week, the mother and the child's teachers reported significant improvement (see enclosed letter from teachers and the detailed case report).

One of the most intriguing things to me about the child's response was the mother's finding that the greatest reactions came from the addition of mushrooms, yeast and sugar ... all of which caused behavioral symptoms.

And since my experiences with this child, I've been using the Truss anticandida program in treating children with hyperactivity. I emphasize diets free of sugar, yeast and molds. Yet I do not limit the ingestion of complex carbohydrates in children.

Along with this program, I've made a number of other recommendations, including the avoidance of chemicals, the use of appropriate supplemental nutrients (including vitamin C and members of the B-complex). I've also prescribed essential fatty acids in the form of primrose oil and linseed oil. Finally, I've carried out intradermal provocative testing as described by Miller, Rapp and others, and have used sublingual extracts in treating many of these patients.

Most of the hyperactive children I've treated with this comprehensive program have improved. Yet, because of the multiple therapeutic modalities I've used, I haven't yet evaluated the role of candida in managing these children.

Because of my growing interest in candida albicans and because of similar interest of many physicians in the Society for Clinical Ecology, an informal Candida Albicans Conference was held in Dallas in July, 1982*. This conference featured the clinical presentations of Dr. Truss and Dr. Sidney Baker (Head of the Gesell Institute for Human Development) New Haven, Connecticut.

Some fifty physicians and a dozen other participants met together to exchange information informally on the yeast problem. This meeting enabled those present to form a consensus about the things we do and don't know based both on clinical experience and basic immunology.

Those participating in the conference unanimously agreed that candida albicans plays an important role in causing chronic illness. And by appropriate recognition and treatment of "the candida problem," many chronically ill people will improve dramatically.

Yet, in the discussion, most of the participants emphasized that candida was only one of many, many nutritional, allergic, biochemical, metabolic, environmental and ecological factors that worked together to cause human illness. And if these other factors were not considered and appropriately managed, many patients would fail to improve.

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- *The entire proceedings of the conference were recorded by Creative Audio, 8751 Osborne, Highland, Indiana 46322. A brief summary of the conference will be published in the forthcoming book **The Yeast Connection** by Wm. G. Crook, M.D. Published by Professional Books, 3494 Jackson, Tenn. 38301. Publication date: October, 1983.

To the Editor:

Immunological studies carried out at the Tumor Institute of the University of Alabama Medical College over the last year and a half have shown abnormalities in the lymphocyte subpopulations as measured by the monoclonal antibody technique.

Severe depression of natural killer cells, depression of helper cells, and, in many cases, elevation of suppressor cells have characterized the abnormalities most commonly found. In addition, a low total T-cell count, low total B-cell count, and diminished numbers of specific immunoglobulin-bearing B-cells, particularly the IgM cells, have been found. Long-term follow-up studies are underway to determine changes in these abnormalities after treatment of the yeast problem.

The purpose of this letter is to point out these as yet unpublished data because of the urgency of exploring all possible factors that could be related to the Acquired Immune-Deficiency Syndrome. This condition has been widely publicized, and no attempt will be made to discuss the details of its behavior. However, the increasing evidence that this condition is occurring in hemophiliacs, in drug addicts, and in male homosexuals in particular, raises the question as to whether such trauma to the skin and mucus membranes might be allowing entrance into the bloodstream.

Candida exists in many strains. One strain, for example, is known to ferment carbohydrate all the way to ethyl alcohol. If *Candida albicans* can induce changes such as reported above in the immune system, it seems worthy of consideration in this strange, rapidly increasing, and often fatal immune-deficiency state. Many potent mycotoxins have been found already, including the "yellow rain" that has allegedly been used in chemical warfare in Afghanistan. The powerful immunosuppressant drug Cyclosporin A, so widely used now in the prevention of the rejection of transplanted organs, is a product of at least two fungi.

Systemic *Candida* invasion has long been known to be associated with the use of catheters, needles, transfusions, etc. These are the same pre-disposing factors that have been identified in the AIDS problem. Thus *Candida albicans* seems to be at least one agent capable of at least a depressing, and perhaps a destructive effect on the immune system. Until the cause of the AIDS problem is uncovered, any approach would seem to be worth considering in a situation of such urgency.

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**Medical Staff Conference,
Jackson-Madison General Hospital
Jackson, Tennessee, May, 1980**

Adverse Reactions to Foods and Chemicals
Immunological Problems Related to Candida Albicans Colonization

Your patient's environment can cause symptoms. And many persons with acute and, more especially, chronic illnesses suffer from reactions to seemingly harmless environmental exposures in the air they breathe and the food they eat.

Common troublemakers include pollens, dust, molds, animal danders, insects, tobacco smoke, foods, drugs, and environmental chemicals of all sorts in water, food, outdoor air and indoor air.

Among the chemical offenders are the following:

Formaldehyde	Paints	Urethane
Petrochemicals	Glues	Gas stoves
Vinyl chloride	Plastics	Carbon paper
Turpentine	Lacquers	Xerox paper
Disinfectants	Cedar	Saran wrap
Magic Markers	Rubber	Hair spray
Insulating materials	Gasoline	Waxes on fruits
Rubbing alcohol	Waxes	Plastic bags for fruits,
Shaving lotion	Tobacco	Meats and vegetables
Moth balls	Perfume	Insecticides
Polyester clothing	Inks	Weed killers
Car interiors	Newsprint	Deodorants
Shower curtains	Nail Polish	Colognes
Detergents	Phenol	Diesel fumes
	Chlorine	

Clinical ecology is a relatively new field of medicine which deals with disorders which develop in patients who show adverse or allergic reactions to substances which are seemingly harmless to the average individual.

The Society for Clinical Ecology is an organization of 300 physicians and other professionals. (For further information write to Del Stigler, M.D., 2005 Franklin St., Ste. 490, Denver, Colorado 80205.)

Patient Presentations

Patricia H.:

Chief complaints included headache, muscle aching, itching, swelling and mental confusion. First onset of problems occurred 14 years ago with a severe reaction in a fabric shop. Symptoms became constant 8 years ago, requiring that she give up her work in a beauty shop. In spite of this, she has suffered from continuing severe symptoms on exposure to perfume, after shave, deodorants, fabric softeners, hair sprays and many other chemical odors. Other symptoms included tightness in throat, cough, stinging and burning, feeling that "things were going too fast inside of her body."

Progression of symptoms during recent years, including edema, diarrhea, weight loss, flushing, itching, headache, blurred vision, short attention span, tingling in arms and inability to think clearly.

Improved on comprehensive elimination of chemicals and molds from home. (September, 1979)

Symptoms were then aggravated by ingestion of yeast. Patient became depressed, irritable and "spaced out".

Started on Nilstat (Lederle), 1 tablet four times a day by mouth. Also put on a low yeast diet and yeast extract. Has improved, but continues to be severely sensitive to environmental chemicals. Patient says "I must live like a hermit." Follow-up March 1983: Since original presentation patient has improved, yet still experiences immune system problems and continues on an anti-candida program.

Tammy G., age 19:

Followed at the Children's Clinic since 1962. Recurrent illness in infancy and childhood; in fact, all of her life. Symptoms have included vomiting, wheezing, failure to thrive, headache, weakness, nervousness, tachycardia, pain in ears. Known troublemakers include chemical fumes of all sorts, hair spray, tobacco, also milk and corn. Visiting teacher at school required because of chemical exposure. Allergy testing and treatment not helpful.

Severe infectious mononucleosis in 1977; flareup of all symptoms, plus depression.

At age 18½, in December 1979, came in for help because of "same old symptoms", including severe headache, blurred vision, abdominal pain, stuffy nose, weakness, nervousness, joint pains, tachycardia, asthma ... "sick all over."

Known troublemakers included chemical fumes, tobacco, foam rubber, corn bread and fumes.

Treatment program included avoidance of foam rubber pillow, all chemical exposures, low yeast diet, Nilstat® by mouth, and candida albicans extract.

Followup report: Has continued to improve. No bad headaches. The nervousness, muscle aching, and asthma are all better. Tachycardia has improved. Still has problems, but improvement is continuing.

Tena H., age 21:

Followed at the Children's Clinic from birth to age 16½. Milk allergy, otitis, adenoidectomy in infancy and early childhood. Then general health was good through grammar school and high school. Married in October, 1977, moved into a home with gas heat and started on the pill. Was also working in small office under boss's smoke. Began to have symptoms of stopped up nose, earaches, headaches, sore throat.

Provocative testing carried out to multiple foods, tobacco and chemicals. Treated with allergenic extracts; improved.

November, 1979, worse. Still continually exposed to tobacco. At that time, started on low yeast diet and Nilstat. Birth control pills discontinued. Has improved much more in the last several months. Also now avoiding smoke.

Cathy Y., age 27:

First seen September, 1979, complaints of severe, constant migraine and "super migraine." Duration of symptoms ... many years. Also rhinitis and conjunctivitis. Environment included gas stove, gas heat, foam rubber pillow, xerox paper (works as a secretary). Known troublemakers include cigarette smoke, perfume, ammonia, insecticides, gasoline. Also on birth control pills.

Provocative testing for foods and chemicals carried out, followed by elimination diet and environmental control. Improved. Even more improvement on allergy extracts for foods and chemicals.

Began to have return of some of her symptoms in January, 1980. On January 15th was put on Nilstat and a low yeast diet, in addition to environmental control and shots. On 3/28/80, patient reports "Doing fine, better than ever. No headaches, no yeast infections. Only minimal eye and respiratory symptoms. The Nilstat® and the low yeast diet have helped more than anything else." Follow-up report in March, 1983, patient states she is "well". Major symptoms of three years ago are 90 percent improved.

Faye P., age 40:

Chronic urticaria for 3½ years. Studied at William Bowld Hospital (University of Tennessee), Jackson Madison-County General Hospital. Tested, fasted, given medications of various kinds including prednisone, Atarax®, Vistaril®, Ephedrine, Brethine®. Also evaluated at Oschner Clinic in New Orleans.

For the past year has taken twice daily Susphrine® to control symptoms.

Put on Nilstat® and low yeast diet in October, 1979. Hives subsided in five days and have not returned. (However, still has rhinitis, fatigue, sinusitis and other symptoms.)

Follow-up phone call in March, 1983 patient states, "I'm well. No sinus; taking no medication and working every day."

3. **Provocative Testing**

- a. **INTRADERMAL:** Dilute extracts of foods, phenol, ethenol, formalin, urethane and perfume are used. Tests are also made for common foods. Skin and systemic reactions may be noted. A weaker dose of the same extract which causes a positive skin reaction or which provokes symptoms "neutralizes" or "turns off" the reaction.
- b. **SUBLINGUAL** testing is similar to the intradermal testing in that symptoms are provoked, then blocked or neutralized. The concentration which neutralizes symptoms may then be used in treating the patient and blocking symptoms which might otherwise occur on exposure.

Treatment

1. Avoidance is best where possible.
2. Lighten load of foods and chemicals causing the reactions. Even partial avoidance may help.
3. Use of food and chemical extracts.
4. Improve the patient's immunological tolerance by decreasing colonization with candida albicans.

Is Candida Albicans an Innocuous Micro-Organism?

CAN COLONIZATION WITH THIS ORGANISM UPSET THE PATIENT'S IMMUNOLOGICAL APPLECART AND RESULT IN CHRONIC ILLNESS DUE TO ADVERSE REACTIONS TO CHEMICALS, FOODS AND OTHER ENVIRONMENTAL SUBSTANCES?

A publication by Dr. C. O. Truss, internist and allergist of Birmingham, in about 1977 described patients with chronic illness who respond to an anticandida program. There are also reports in the medical literature, especially from England, on the treatment of chronic urticaria by a program designed to reduce candida colonization.

How to Suspect and Detect Patients with the Candida Problem

1. History:
 - a. Young women especially between 18 and 35.
 - b. History of multiple antibiotics, birth control pills, steroids and diets with high sugar and yeast content. (These factors all encourage candida colonization.)
 - c. History of two or more "yeast infections" in a one year period.
 - d. History of multiple system involvement, especially involving the nervous system, the gastrointestinal tract and the reproductive organs.
2. Tests, including vaginal smears, skin tests and other sophisticated laboratory tests play little role in the diagnosis, since everyone is colonized by candida. However, provocation of symptoms on testing with candida extract may help in confirming the diagnosis.

Diagnosis

Presents no problem if the adverse reaction to the environmental substance is widely spaced or intermittent. (Examples: Occasional visit to fabric shop, or driving behind a diesel bus, or eating of a lobster.)

But with cumulative exposures to foods and environmental substances, especially chemicals, chronic symptoms may slowly and insidiously develop and the relationship of the causative factors to the symptoms may not be apparent. (Examples: Individuals may be made ill by formaldehyde in wall board, antimold chemicals in paint, insecticides, polyurethane insulation, foam rubber and gas heat.)

Similarly with food reactions. Hives due to uncommonly eaten foods, such as lobster and strawberries, are easy to recognize. By contrast, cumulative exposure to the same foods (such as corn, wheat, milk, sugar, soy, coffee and tea) several times a day may result in chronic symptoms because

1. The symptoms develop gradually
2. The individual often becomes addicted to the troublemaking food
3. He usually gets a "pick up" when he eats the food he's sensitive to (similar to the narcotic addict or the nicotine addict).

Specific Diagnostic Procedures

1. Elimination Procedures

- a. Environmental. Efforts should be made to get rid of all "outgassing" synthetic materials, including foam rubber, plastics, cleaning fluids, perfumes, colognes, tobacco in the home or work environment. Even though all cannot be eliminated, partial elimination may help.

Trial out of the home. Visit to another home, go on camping trip, or an ocean voyage.

- b. Elimination Diets:

- (1) Elimination Diet A avoids 8 foods
- (2) Elimination Diet B avoids any and every food the patient eats more often than once a week.

- c. Five-day fast with spring water, followed by challenge with individual foods.
- d. Fasting plus comprehensive environmental control in a special hospital unit.

2. Testing, Including Laboratory Studies

- a. RAST testing, IgE studies, scratch tests and other immunologic studies are of relatively little help in chemically sensitive patients and in 80 percent of the food sensitive patients.
- b. Low T lymphocytes in 30 to 40 percent
- c. Low serum complement in 30 percent

3. More on history. When a patient who fits several of the criteria described in section 1 develops multiple symptoms referable to many body systems, candida colonization and immunological imbalance may be responsible for food and chemical intolerances and allergies.

A typical symptom picture of such patients includes symptoms in just about any and every part of the body, including rhinitis, sore throat, dry throat, fatigue, irritability, depression, numbness, tingling, confusion, short attention span, headache, tachycardia, flushing, itching, hives, nausea, bloating, diarrhea, with urinary frequency and genital burning, itching and discharge. In addition, there may be aching, swelling and stiffness of the joints.

Treatment of the Patient with the Candida Problem

1. Rule out other causes for the patient's symptoms.
2. Nystatin, 1 to 4 tablets four times a day.
3. Sugar-free, yeast-free diet with restriction of other carbohydrates in selected patients.
4. Treatment with candida extract.
5. Ketoconazole may be useful in some patients (use must be monitored by periodic check of liver enzymes).

Concluding Comments and Summary

1. Adverse or allergic reactions to foods and chemicals are a common cause of human symptoms.
2. The frequency of illness caused by such reactions appears to be increasing.
3. Factors leading to such an increase include:
 - a. Growing load of environmental chemicals:
 - Petrochemicals from automobiles
 - Chemicals discharged in the air
 - Chemicals in the water by industry, plus chlorine and fluorine
 - Weed killers and insecticides
 - Synthetics in building materials
 - Synthetics (polyesters, formaldehyde, etc.) in clothing
 - Tobacco
 - Perfume
 - Chemicals in food
 - Airtight houses
 - Gas home heating and cooking
 - Cleaning materials in homes, schools and public places
 - b. Other possible factors:
 - Artificial feeding of infants
 - Overload of refined foods and other foods including sugar, milk, coffee and corn (dextrose)
 - Widespread use of antibiotics.

4. The public is increasingly aware of such illness and is looking for help.
5. Diagnosis:
 - a. Exclude other diseases by routine history and physical examination and appropriate tests.
 - b. Suspect it from history.
 - c. Confirm it by
 - (1) Elimination diets (single foods, multiple foods, fasting)
 - (2) Comprehensive environmental control measures.
 - (3) Provocative and challenge testing (Intradermal and Sublingual)
6. Treatment:
 - a. Lighten the load by avoiding food and chemical offenders
 - b. Use immunotherapy where appropriate
 - c. Use a program designed to overcome candida colonization including diet and nystatin
 - d. Use other appropriate nutritional, metabolic and psychologic management based on the needs of the individual patient.

Case Histories

J. H., birthdate 6/21/49

Chief Complaints:

1. Earaches
2. Throat clearing, night cough, chest pain
3. Fatigue, aches like flu
4. Headaches, dizziness, nausea
5. Bladder problems
6. Premenstrual tension

History Present Problem & Past Medical History: This 33-year-old mother of two was first seen on July 10, 1982. Here's her story, written in her own words: "I'm ready to find out if it's 'all in my head' and my symptoms are due to 'just getting older' or whether there's something that's really making me feel sick.

"All my childhood, I suffered with stomach problems which were usually blamed on 'nerves.' But when my children developed allergies, I began to suspect that allergies were part of my trouble, too. After my first child was born, I was troubled by painful aches in my fingers and knees for 2 or 3 months. When my mother suggested I quit dipping the baby's diapers and quit using Clorox, the aches went away.

"About a year later, I developed a strange swelling in my ankles and feet which caused enough pain to prevent walking. I couldn't even get my shoes on. So I went to an orthopedic surgeon for a checkup. Although he found no reason for the swelling, he did give me medicine. Gradually the swelling subsided.

“Soon after that, when my first child was 18 months old, her pediatrician put her in the hospital for tests (she had been troubled with abdominal pain, colds and all sorts of other complaints). When the tests were all OK, he took her off milk. She immediately improved. I couldn’t believe it.

“Then after her third birthday, we eliminated corn, peanuts, butter, chocolate, peas and beans and she was “like a different child” within a week. No more screaming in her sleep or constant whining. It made a believer out of me. And my awareness of allergies increased further when my son also showed obvious allergic reactions.

“But back to my story. I began having headaches, dizziness, nausea, sore throat and earaches in the fall of 1980. My doctor put me on several antihistamines and intermittent antibiotics. But because I hate to depend on medicine, in the fall of 1981 I decided to eliminate coffee, tea, milk, orange juice, colas and chocolate because of the reactions I’d seen in my children.

“Food elimination helped to some degree, but during the winter and spring I was troubled by persistent night cough and tickle in my throat. Then last summer, after a short exposure to paint, I felt sick with generalized aching, symptoms of a cold and hurting in my chest. From time to time, I’ll develop what seems like the flu but it only lasts one day. As I tried to figure it out, I remembered that I had used Clorox and Comet.

“The last 3 times I had my teeth filled, I’ve had a scare. The injections of Novocaine made me tingle, light-headed, confused and fatigued, severe enough to concern the dentist.

“This spring, I’ve developed bladder problems; two infections and frequent urination. I’ve also been unable to empty my bladder without hard pushing. These symptoms took me to a urologist who diagnosed it as “a small urethra and spasm.” He dilated me and gave me medicine. Incidentally, frequent urination had been a part of my life, but not the pressure.”

Additional symptoms included premenstrual tension, swelling, weight gain and breast soreness.

A review of her diet showed that she ‘loved sugar-sweetened cereal, ice cream, corn on the cob, Mountain Dew®, Oreo® cookies’ which she ate along with some good food.

Medication included Marax® for cough which helped, plus Urogesic® for bladder symptoms.

Physical Examination: The patient showed typical “allergic shiners” and a lavender nasal membrane. She had an overall appearance of fatigue.

Limited allergy testing to common inhalants showed no significant reaction.

She was started on nystatin, 1-million units (¼ tsp. of powder) four times a day and a yeast-free, low-carbohydrate diet.

Follow-Up Visit, July 27, 1982: Two weeks after beginning treatment, J. states, “I’m much better. My ears are better, and my night cough and bladder problems are gone. My energy level has improved significantly and I no longer feel bloated.”

Nystatin and dietary treatment was continued; yeast-free vitamin/mineral preparation was added, along with calcium lactate, 1000 mgs., and magnesium oxide, 400 mgs. a day.

Follow-up Visit, Sept. 27, 1982: In for recheck, hasn't done quite as well recently. More premenstrual tension, sore breasts, irregular period. Flareup of symptoms anytime she cheated on her diet or when exposed to chemicals. Nevertheless, much improved.

Recommendation made for a larger dose of nystatin, 2-million units ($\frac{1}{2}$ tsp. powder four times a day).

Follow-up Visit, November 8, 1982: After taking $\frac{1}{2}$ tsp. of nystatin four times a day for 10 days, she felt relieved of all symptoms, including her premenstrual tension. She then cut the dose in half and generalized aching developed. Put back on $\frac{1}{2}$ tsp. four times a day indefinitely, plus continuing avoidance of chemicals and foods containing yeast or refined carbohydrates.

Follow-up Phone Report, March, 1983: Continues to improve; however remains chemically sensitive. Experiences symptoms if she cheats on her diet and continues to require nystatin for control of symptoms.

T. F., birthdate 4/2/54

Chief Complaints:

1. Numbness and tingling in arms and legs.
2. Problems with walking.
3. Weakness all over.

History Past and Present Illness: First seen on 10/1/82. This 28-year-old truck driver had had a moderate number of ear and throat infections during childhood and took many antibiotics. A little asthma which was outgrown. Then generally healthy until early 20's. At that time, had a serious motor accident, fractured skull, part of skull-bone replaced with a plate. Took many antibiotics. Also took prolonged antibiotics five years ago because of a pilonidal cyst.

Noted some peculiar visual problems in the summer of 1981 which disappeared.

Then in January, 1982, developed numbness, tingling and weakness in both legs. Within a few days, he developed problems in walking, plus other muscular symptoms including back pain.

Prednisone was prescribed for one month, resulting in some improvement. In March, 1982, numbness and tingling moved to the left hand. Regained the use of his left foot, but tingling and backache persisted. Meanwhile, there was loss of coordination in the left hand to such a degree that he could not work.

In April, was seen at a famous mid-western clinic and a diagnosis of multiple sclerosis was made.

Through the summer of 1982, symptoms improved to such a degree that he was able to return to work. Then in September, following extra physical activity, weakness in legs returned. Also had noted that ingestion of sugar would aggravate symptoms.

Because of reports from Dr. C.O. Truss of favorable response made by some multiple sclerosis patients using the anticandida treatment program, and because this patient had received many antibiotic drugs, he was started on nystatin and a yeast-free, low-carbohydrate diet. He was also advised to purchase an air ionizer for use in his truck so as to limit chemical exposure.

At the time of review visit on November 5, 1982, T. reported, "I'm significantly better. The numbness, tingling and weakness is less intense. The incoordination has gone; the bladder problem and constipation have disappeared and the lower back pain is less intense.

Additional nutritional supplements were prescribed, including essential fatty acids, multiple vitamin/mineral preparation. His dose of nystatin was $\frac{1}{4}$ tsp. four times a day.

Review visit, May, 1983: Driving his truck 10,000 miles a month, continuing nystatin and diet. Asymptomatic unless he cheats on diet.

P. R., birthdate 3/1/58

Chief Complaints:

This 24-year-old office worker came in for the first visit on 5/3/82 with complaints of joint and muscle aches and pains, fatigue and depression.

She commented, "For the last 4 or so years, I've had aches and pains in just about every part of my body. The aches and pains did not occur frequently until December, 1981, one to two months after the birth of my first child. Since then, it's been almost constant. This pain seems to travel from one part of my body to another. I also don't feel as active as I used to."

And she continued, "I also suffer from fatigue and depression and have a lot of peculiar feelings in my ears which seem to get hot."

Systems Review showed constant runny nose, sinus trouble, canker sores, dizziness, chest pain, occasional nausea, frequent urination, irritability, numbness and tingling.

She also gave a history of recurrent vaginal yeast infections and the ingestion of a lot of "junk foods", including a lot of carbonated beverages. She had also taken antibiotics recurrently for bladder infections and had taken birth control pills intermittently, beginning at the age of 17.

Exposure to chemical fumes and odors, including tobacco and perfume, causes immediate aggravation and symptoms.

Examination by various physicians in April, 1982 showed a diagnosis of "arthritis and probable systemic lupus erythematosus."

P. was placed on a small dose of nystatin and a yeast-free, low-carbohydrate diet. In addition, on dietary experimentation she found that her joint pains were made worse by potatoes, beef, sugar, nuts, chocolate and smoke.

Follow-up Visit, October 18, 1982: P. reported marked improvement, although she would still experience painful joints on exposure to smoke, or when she ingested foods listed above.

Her treatment program has included:

Nystatin, 500,000 to 1-million units four times a day; A diet low in sugar and free of molds and yeasts; Avoidance of beef, potatoes and chocolate; Avoidance of chemicals; A yeast-free, multiple vitamin/mineral preparation; A supplement (linseed oil or primrose oil capsules) containing essential fatty acids.

K. D., age 30

Chief Complaints:

1. Recurrent vaginitis, 13 years
2. Severe vaginitis, persistent 18 months
3. Frequent headaches, fatigue, intermittent abdominal cramping and generalized itching.

History Present Problem and Past Medical History: Generally healthy as an infant, young child and teenager. Intermittent vaginitis developed at age 17, generally responded to vaginal creams. Married at age 22, 2 pregnancies; a number of bladder infections treated with antibiotics. Symptoms began to worsen at age 28, with development of new symptoms including low abdominal pain, bloating, alternating constipation and diarrhea.

Diagnosis of mixed vaginal infection. Treated with vaginal creams and tetracycline, Amoxicillin[®], Septra[®]. Hysterectomy performed. Some improvement in abdominal symptoms, but headaches, fatigue, generalized itching and persistent vaginitis continued.

First seen October, 1981. Started on low-carbohydrate diet, Nizoral[®] (ketoconazole), 1 tablet daily, vitamins and minerals. Septra[®] discontinued. Given instructions for mold avoidance.

All symptoms began to improve promptly. Then after a period of improvement, there was a relapse with abdominal bloating, body itch, persistent headache and vaginitis.

Adjustments in treatment program made, including retesting for candida and use of weaker doses of candida extract for immunotherapy. Also, because patient had noted reactions to a wide variety of foods, was tested, using the intradermal provocative test, for a majority of the foods that she was eating, followed by the use of immunotherapy with sublingual drops. Began to improve again.

In the ensuing months, there was gradual steady improvement, but a number of ups and downs. Other studies which were carried out included blood vitamin analysis which showed low levels of vitamin A ... 23 (normal range 25 to 75). Additional vitamin A was prescribed, 50,000 units daily, for a month.

Because reports released in February, 1982, indicated the possibility of liver toxicity from Nizoral[®], blood tests to study liver function were ordered. Abnormalities were noted on tests for SGOT and SGPT (liver enzymes). Accordingly, Nizoral[®] was stopped and patient was put back on nystatin. Did not do as well on nystatin as on Nizoral[®]. However, has continued to slowly improve in all symptoms, although many symptoms persist.

Comment: This patient illustrates a number of points, as follows:

Many happenings in her medical history stimulated the growth of candida, including pregnancy, the use of multiple antibiotic drugs. Immune system problems were evident by her multiplicity of symptoms and by the persistent vaginitis which her own immune system failed to overcome. Although treated persistently with anti-yeast medications, including both nystatin and Nizoral[®] and a mold-free, low-carbohydrate diet, health problems have continued. Other adjunctive treatment measures have also played a part in helping her immune system recover. These have included vitamin and mineral therapy and immunotherapy with allergy extracts for foods, supplementation of diet with essential fatty acids, control of environmental molds.

W.M., birthdate 9/8/76

Date of first visit: Jan. 11, 1982.

Chief Complaints:

1. Speech problem
2. Hyperactivity
3. Constant colds
4. Recurrent ear infections
5. Symptoms of autism

History of Present Problem and Past History: Birthweight 6 lbs., 12 ozs. Delivered at Vanderbilt. Mother states, "I was given drugs to knock me out. The baby was sleepy."

Some respiratory distress syndrome, some oxygen required.

History as Written by Mother: "From the beginning he had problems; cried after each feeding, cried in between, always hungry, gas, spitting up and sleeping problems."

He soon developed colds and ear infections. The doctors changed his formula and changed it back several times. He was hyperactive even as an infant. However he was a "smart baby who learned quickly."

Constant colds continued. He averaged one ear infection a month.

Developmental milestones showed that he sat alone at 6 months, stood alone at 8 months, could walk across room at 11 months. Speech developed normally and by one year could say 20 words, but then progression seemed to cease.

Around the age of 2, he became worse, with more hyperactivity and the autistic symptoms began to appear, although they were only mild. Communication became an increasing problem. Speech was broken and very fast.

“At age 2, we moved into a new home. Grandmother put a new carpet on the floor with a foam or rubber back. I went to work and W. stayed with my mother through the day. When he was 14 months old, he had a reaction to an area rug. He developed a clear runny nose, his eyes became red and swollen. He wheezed and coughed.”

At age of 2 he ate tons of junk food at grandmother’s home ... colas, sweets of all kinds. He also drank 1½ - 2 quarts of milk a day. Monthly ear infections continued.

Between 3 and 4 he was given extra doses of B and C vitamins which seemed to help. Also he was placed on the Feingold diet with “great improvement.”

Physical symptoms and signs have included dark circles under his eyes which deepened from time to time. At times eyes appear glassy. Also runs a low grade fever. “He has the classical symptoms of autism in a mild form but he does try to communicate.” Behavior and performance is inconsistent. Very hyper some days, not so hyper others. Learning ability is inconsistent.

Physical Examination:

Weight 45 lbs., height 40 ins. Strikingly pale with dark infraorbital circles. Ears looked remarkably good, especially in view of previous history. Nose congested with clear mucus. Speech was unintelligible. Details of physical examination otherwise not remarkable.

Impression:

1. An allergic child with recurrent respiratory problems and autistic behavior.
2. The attention-deficit disorder with hyperactivity.

Disposition, Treatment and Comment:

At the time of this first visit on January 11, 1982, the child was placed on the “cave man diet” ... a basic elimination diet avoiding any and every food that he ate more than once a day (as described in Tracking Down Hidden Food Allergy, Professional Books, Box 3494, Jackson, Tennessee 38301).

Followup Visit: March 9, 1982:

W’s mother reported the following:

“On the elimination diet, W showed a dramatic improvement after a period of 7 days. He became much more responsive and began to cooperate.”

On challenge, a number of foods caused reactions. Here are comments made by Mrs. M. in a diary which she brought with her:

“Wheat .. within 30 minutes after eating wheat, his pupils dilated and he stared into space more. Within a few hours, he showed more autistic behavior.

“Mushroom ... W became hyper, **wild**, aggressive, ill, crying, throwing things, pupils dilated.”

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"Yeast ... Similar to mushrooms (maybe to a lesser degree), but followed by a depressed state; continued the next day. Mushroom reaction left quicker but yeast reaction stayed longer."

Other foods, including corn and raisins, also caused reactions.

Comment:

The sharp flareup in symptoms on challenge with yeast, mushrooms, sugar and wheat, plus the history of multiple antibiotic drugs suggested the possibility that this child's problem could be related to Candida colonization which affects the immune system and causes a wide variety of systemic and nervous system symptoms.

Disposition:

1. Foods which cause trouble to be avoided completely.
2. An anticandida program was prescribed, including nystatin powder, a yeast and mold-free diet, free of refined carbohydrates.

Follow-up Report by Mail (April 6, 1982):

"W continues to improve. He is now writing more of his ABC's and can write the alphabet in order, down to H. He is now using more language and putting words together, such as 'cook cookies,' 'want to go.' His understanding of language is still improving, although speech is still fast. He is dressing himself and is awakening to the world."

Progress report, April 28, 1982:

Phone call to Mrs. M. on this date. She reported the following: "For a period of some weeks, I had been living with my mother in another house. W's symptoms flared up on returning to our home where family had lived when his problems started. Possibly mold or chemicals in the home. Family moved out again and symptoms improved."

Follow-up, October 17, 1982:

Grandmother reports that W is doing much better. He's continuing his anticandida program. Also, she has found that additional vitamins and minerals, especially large amounts of the B-complex, including B-6, are essential for maximum functioning.

Follow-up, November 20, 1982:

W has continued to improve although there are "ups and downs". Much better attention span, less hyperactive, less aggressive. Mother had been doing a number of different things.

1. Nystatin, 1/8 tsp. three times a day. She said this definitely helped.
2. Rotating his diet, giving uncommon foods, especially nuts, fruits and vegetables, and rare meats.
3. Avoiding sources of chemicals.
4. Obtaining an air filter or ecologizer.
5. Giving large doses of vitamins, including the B-vitamins.
6. Magnesium and calcium.
7. Vitamin C

Evidence from the research studies of Horrobin, Rudin and Baker indicate that essential fatty acids help patients with a variety of complex health problems. Based on these reports, as well as reports from my own patients, I prescribe primrose oil

capsules (Gammaprim® available from GNC stores), two capsules night and morning, and linseed oil, one teaspoon twice daily.

Between April, 1982 and February, 1983, W continued to improve. However, there were ups and downs. Exposure to chemical fumes (returning to his old home which had been contaminated by formaldehyde-impregnated particle board) caused severe relapse. Also, family noted that larger doses of B vitamins, especially B-6, were essential for optimal functional.

In a letter in April, 1983, W's mother reported, "W is much better ... at home he seems like a different child, a sweet, well-behaved child ... He goes most everywhere with us now, even grocery shopping. He selects a lot of his own food and seems to have a good understanding of what he can and cannot have He is much more responsive to classmates, teachers and family members. He knows his ABC's and can write them and his name without help. We're beginning to work on words and reading. His receptive language is very good and his oral language is better He solves problems for himself and is becoming more independent. His health is 100 percent better He is going to a gymnastic class twice a week Everyone is really happy and excited about the change in W and his future looks brighter."

The following letter was received from: The Centre for the Early Education of the Handicapped, Grassland School, Rt. 7, Franklin, Tn. 37064

Dear Dr. Crook,

We want to provide you with some documentation of the change in W. M.'s behavior between October 1981 and March 1982 which may be attributed to the change in his diet. W's first days in attendance at C.E.E.H. evidenced long periods of screaming in an effort to get attention, frequent biting and pinching especially when redirected, kicking other children, and throwing toys. He exhibited an extremely high activity level and spent his hour long rest period kicking his legs and flipping over on his cot. His attention span for all activities was very short — 1 - 2 minutes and his eye contact with persons and objects approximately 5 seconds long. His response to commands was non-existent and self-stimulatory finger play was at a premium.

The institution of the allergy-free diet caused noticeable changes in W's behavior. Within approximately 2 months W's readiness for learning improved dramatically. There was a significant decrease in his activity level, decrease in aggressive and self-stimulatory behavior, increase in attention span and in response to commands, and less generalized irritability. While behavior modification programs were instituted at school, W's sporadic attendance and variable behaviors cause us to question whether or not these programs could account for the remarkable progress in W's behavioral development. To further illustrate the apparent effectiveness of the diet, when W required antibiotic treatment with medicine containing known allergens, his activity level, self-stimulatory behaviors, and irritability all increased.

The staff of CEEH commend your efforts with W and hope that we can continue to work together in the future.

Sincerely,

Lynda S. Edmunds
Patricia J. Fiete

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Concluding Comments

Since I first learned of the relationship of candida albicans to human illness, my life and my practice have changed dramatically. I can hardly wait to get to my office each day because I know I'll be seeing people I can help. Many of them complain of so many symptoms they've been labeled "hypochondriacs". Others with supposedly incurable diseases have been told, "You'll have to learn to live with this condition." Yet, in the last four years, I've been able to help hundreds of these long-suffering patients. Moreover, my experiences are being duplicated by many other physicians.

In my opinion, before this decade ends, the pioneer clinical observations of Dr. Truss will rank with those of medical pioneers, James Lind and Ignace Semmelweiss. In 1745, Dr. Lind discovered that sailors who ate limes wouldn't develop scurvy. Yet, leaders in the British navy ignored his observations and sailors continued to suffer and die. Finally, in 1795, some 50 years later, limes were put on board all English ships. But it wasn't until 1929, with the discovery of vitamin C, that doctors knew why limes prevented and cured scurvy.

In 1845, one hundred years after Lind, a 26-year-old Hungarian doctor, Ignace Semmelweiss, discovered that dreaded "child bed fever" could be prevented. All that was necessary was careful handwashing by physicians before carrying out pelvic examinations of women in labor. Yet, medical leaders ignored, ridiculed and ostracized Semmelweiss while thousands of women died in childbirth. Finally, 25 years after Semmelweiss' original observations, medical discoveries in the field of bacteriology explained why handwashing worked.

Although yeast-connected illness, unlike scurvy and child bed fever, rarely kills its victims, it causes suffering, disability and disease which can last for decades.

I realize that nystatin and a special diet won't cure every human ailment. Yet, along with hundreds of other American physicians and thousands of patients, I've found that an anti-candida treatment program helps many frustrated, discouraged, sick people regain their health.

I freely acknowledge that many questions remain unanswered and I hope scientists and researchers will tackle them in the months and years to come. Like other physicians who are treating yeast-connected illness, I'm excited. And whether you're a physician or other professional, a yeast victim or an interested bystander, I feel the recognition of the role of Candida albicans in human illness will interest you. Moreover, I feel it is an important part of what I recently termed **The Coming Revolution in Medicine** (Journal of the Tennessee State Medical Association, 76:145-149, 1983. For a reprint, send a stamped (U.S. postage), self-addressed envelope to Box 3494, Jackson, Tennessee 38303).