

# Guidelines in Treating the Alcoholic Patient in the General Hospital Orthomolecular Therapy

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*Dr. Nathan Brody's paper was received in the office of the Journal of Orthomolecular Psychiatry the end of April, from Dr. A. Hoffer, editor-in-chief. Shortly after the paper was prepared for publication word was received that Dr. Brody had passed away. His paper, "Guidelines in Treating the Alcoholic Patient in the General Hospital," is being published posthumously as a tribute to Dr. Brody and his work, and because of its value to other general practitioners interested in treating alcoholics with Orthomolecular techniques.*

*Dr. Brody had treated alcoholics for 23 years. He was the founder of the Belknap County Committee on Alcoholism and Drug Abuse, the oldest such small committee in the United States. He was the first physician to admit alcoholics to the Lakes Region General Hospital with the diagnosis of alcoholism 23 years ago. Eventually he was treating more than 500 new cases a year and admitting over 300 new cases a year to hospital. Dr. Brody was a member of the American Medical Society on Alcoholism; member of the board of directors of the Eastern Area Alcohol Education and Training Program; chairman of the Medical Review Board of the Alcohol Safety Action Program of the State of New Hampshire; chairman of*

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*the Advisory Council to the State Program of Alcohol Abuse and Alcoholism; member of the New Hampshire State Medical Society, Committee on Mental Health, Sub-Committee Alcoholism. He served on the Faculty of the New England Studies Course and was on the program for 1977, and served on many advisory committees and commissions to the Governor and state programs in the field of alcoholism. In June, 1975, he received the Granite State award by the University System; State of New Hampshire, for his work in alcoholism. The National Conference of Christians and Jews gave him a Certificate of Recognition, and A. H. Robins gave him the Community Service Award for his work in alcoholism. He was constantly being called upon to speak before state and out-of-state organizations.*

*Dr. Brody was a general practitioner for 43 years. He will be sadly missed.*

**To my wife, Rose—without your love and understanding, this would not have been possible.**

Our interest and activity in the field of alcoholism have intensified greatly, and over the past 23 years we have evaluated and treated thousands of alcoholic patients. In our work in this field we have utilized almost every known approach at one time or another, but our successes

were relatively meager until we began using the psychobiological and nutritional approach that we are here expounding. Since the inception of this particular treatment regimen, our successes have increased in vast proportion, and even our so-called failures respond and do better than the therapeutic successes of the past.

With this in mind, and due to the great interest and numerous inquiries about our methods, we are hereby attempting to set forth the basic principles and ideas utilized in our treatment of alcoholics.

Our approach actually encompasses a combination of various nutritional and psychobiological elements, based on the research accumulated over the years, which have direct bearing on the etiology and treatment of alcoholism.

### **Relative Hypoglycemia**

One factor that we investigate in our alcoholic patients is the existence of functional or relative hypoglycemia as either a cause or a result of the alcoholism (Salzer, 1966). In many research reports, including one by Salzer (1966), it has been stated that abnormal fluctuations in levels of blood sugar can cause neuropsychiatric difficulties which could lead a patient to alcoholism. It is also known that ingestion of large amounts of carbohydrates, of which alcohol is one, over a long period of time can cause hypoglycemia, thus causing more disturbances.

### **Nutritional Deficiencies**

Over the years it has been well established that alcoholics in particular suffer certain nutritional deficiencies due either to malabsorption or inadequate intake of nutrients, or both.

The most common deficiencies found in alcoholics are those of vitamins B-1, B2, B3, B6, and folic acid (American Dietetic Association, 1971); the elements zinc, calcium, magnesium, and potassium; and proteins. In our treatment program we test for deficiencies in all areas, and use as our diagnostic criteria the norms established by our reference laboratory, Leary Labs of Boston, Mass.,

and those set by researchers at the New Jersey Neuropsychiatric Institute, Princeton, N.J.

We have found very few alcoholics who are not zinc deficient and that cirrhotic alcoholics have the lowest zinc levels. We believe that severe zinc deficiency plays a role in the development of cirrhosis.

Magnesium deficiency may play an important role as a cause of confusion and "the shakes" during the withdrawal phase of chronic alcoholism.

### **Psychiatric Disturbances**

It is well established that psychiatric difficulties of all types can lead to, or develop as a result of, alcoholism. But our interest in this area and its incorporation into our treatment program is based on the belief of the existence of psychotic symptomatology correlations to psychotic behavior. It is in this particular aspect of the psychiatric disturbances that our interest lies, and as a result this has become a vital aspect of our treatment program.

The determination as to whether or not psychotic symptoms exist in a patient is based on the results of the Hoffer-Osmond Diagnostic Test (HOD) (Kelm et al., 1967). The HOD test, as it is commonly called, is a psychometric test designed to measure disturbances in thought process, perception, and mood. If the scores of a particular patient are found to be above normal, established, cut-off\_scores, a psychiatric determination can be made as to the existence of psychiatric symptomatology.

Based on the results of the HOD test, we can usually distinguish between the "toxic psychosis" often found in alcoholics as a result of over-ingestion of alcohol and other psychotic illnesses such as schizophrenia. Toxic psychoses usually respond quickly and dramatically simply to withdrawal of the toxic agent, whereas with a schizophrenic process the remission of symptoms is usually very slow and may even worsen during this period. An investigation of various physiological elements is accomplished in order to ascertain biochemical cor-

relations to psychotic symptoms and thus be able to specify treatment.

Much research attention has been recently devoted to the biochemical factors involved in the onset of psychotic symptoms. It is due to our close association with one of the research centers involved with this work that we routinely test our patients, particularly those with abnormal HOD scores, for some of these factors. The following is a short summary of some of these biochemical factors linked to psychotic illness that we test for:

#### **Kryptopyrroluria (Pfeiffer et al., 1974)**

Kryptopyrrole (Kp or the mauve factor) is a chemical substance found present in the urine of about 30 percent of all schizophrenic patients, which was found to complex with zinc and vitamin B6 to cause a deficiency of these two substances. This deficiency has been found to cause certain symptoms (even psychotic symptoms) which respond to large doses of vitamin B6 and a zinc supplement. The onset of these manifestations is insidious, but responds quickly to treatment. We also have found that a great many of our alcoholics, even those not manifesting psychoses, maintain an elevated level of kryptopyrrole. For these reasons all our patients are evaluated and tested for this element regardless of HOD scores. Treatment is begun immediately if the Kp level is found to be above the normal range, which is 0-20 mcg percent.

#### **Hypercupremia (Pfeiffer and Miev, 1972)**

Another factor in the biochemical aspects of psychotic symptomatology has been found to be abnormal elevations of serum copper. Copper has been found to be excitatory and a source of stimulation to brain tissue which in and of itself can cause psychotic symptoms. Copper also is found to be antagonistic to zinc (which is tranquilizing to brain tissue). Elevated serum copper levels may be lowered, therefore, by the use of zinc supplement alone. If the serum copper is found to be very high, then a preparation of D-penicillamine may be administered as well as the zinc supplement. The norms utilized to make the determination of hypercupremia are those

established by researchers at the New Jersey Neuropsychiatric Institute and are as follows: N:0.90- 1.20mcg/dl.

#### **Histapenia and Histadelia (Pfeiffer et al., New jersey Neuropsychiatric Institute; Pfeiffer, 1973).**

Levels of serum histamine either higher than normal (histadelia) or lower than normal (histapenia) have been found to be a cause of psychotic symptomatology by virtue of the nature of the chemical action of histamine on brain tissue. The determination of histamine level is of particular importance because there is a distinct and different treatment program to follow for each classification, either high or low. A patient who exhibited a low-histamine level should have this histamine level raised, and conversely for the patient with high-histamine level. The norms utilized in this determination are: n: 40-70 ng/ml.

We have had great difficulty obtaining accurate histamine levels so we are now doing the circulating basophil count which correlates well with histamine levels. The high basophil count correlates with high-histamine level, and the low basophil count correlates with the low-histamine level.

#### **Treatment Program**

Basically, our treatment of alcoholics is aimed in two directions: (1) to the long-term or chronic patient who presents no acute emergency and can be treated as an outpatient; (2) the patient *experiencing* severe, acute difficulty who must, for a time at least, be treated as a hospital inpatient.

When an alcoholic is admitted to our hospital experiencing acute difficulty, certain procedures are performed immediately—even before treatment is begun—in order to ascertain his true status prior to therapeutic intervention. "STAT" blood alcohol and blood sugars are drawn. The blood alcohol is to ascertain the level of alcohol in the blood which will later be used in confrontation tactics with the patient. The blood sugar

is to determine whether or not the patient is in a hypoglycemia state. Also at this time, blood samples are drawn for the determination of nutritional factors, such as folic acid level, and zinc, potassium, magnesium, calcium, and copper levels.

The first step in treatment of the acute, hospitalized patient is the administration of an intravenous solution of Solu-B Forte (Upjohn) with an additional 200 mg of pyridoxine added, all in 1 liter of fluid. In case of the very sick patient we will double the above amount of vitamins. This phase of treatment serves two purposes: (1) to immediately improve the nutritional and physiochemical status of the patients; and (2) to help sedate the patient. (It has been shown in recent literature that certain vitamins included in this preparation, especially B3, have a sedative effect.)

This process of administering intravenous solutions of vitamins is continued once a day for at least five days, or until such time as substantial clinical improvement is achieved. Concomitantly with this phase of treatment, since approximately 70 percent of our patients experience hypoglycemia symptoms, orange juice is given every two hours when possible, and the patient is placed on the Seale-Harris Diet. Since we must not ignore the withdrawal symptoms often experienced by these patients, appropriate doses of clordiazepoxide hydrochloride (Librium, Roche) and/or chlorpromazine (Thorazine, SK&F) are utilized.

At the same time as the previously outlined treatment program is in process, or at such time as the patient is able, the patient is administered vitamins and minerals by mouth according to the following regimen:

- |                          |         |                    |
|--------------------------|---------|--------------------|
| 1) Niacin                | 500 mg  | T.i.d.             |
| 2) Vitamin C             | 500 mg  | T.i.d.             |
| 3) Thiamine              | 100 mg  | T.i.d.             |
| 4) Riboflavin            | 25 mg   | T.i.d.             |
| 5) Calcium Pantothenate  | 100 mg  | T.i.d.             |
| 6) Vitamin E             | 2001.U. | T.i.d.             |
| 7) Pyridoxine            | 100 mg  | T.i.d.             |
| 8) Supplement containing |         | zinc and manganese |

This oral regimen is followed until the lab reports are returned; then the regimen is altered suitably to fit the patient's individual needs. Additional items such as folic acid and vitamin B12 can be added if it is found necessary, or already established medication can be increased or decreased if necessary.

In most cases significant improvement has been achieved within 24 hours on this program, and as soon as this improvement is seen and the patient is deemed to be able, the HOD test is administered to determine whether or not a psychotic process is in effect.

After a two- or three-day period on the Harris Diet, the patient is given the five-hour glucose test to determine the existence of relative or functional hypoglycemia.

When the results of basophil count and mauve factor return, the patient's therapeutic regimen is altered to suit his particular physiological needs according to a protocol established by Dr. C. C. Pfeiffer of Brain Bio Center, New Jersey, formerly of the New Jersey Neuropsychiatric Institute. The regimen administered to patients found to be low in serum histamine is:

1. Niacin
2. Folic acid
3. Vitamin B12
4. Pantothenate
5. Zinc-manganese

The regimen administered to high-histamine patients is:

1. Calcium
2. Methionine
3. Diphenylhydantoin
4. Zinc-manganese

Besides the attention given to the physiochemical, nutritional, and psychobiological needs of the patients, attention is also paid to psychosocial and physical needs. For example, an extensive program of ambulation, exercise, and physical therapy is instituted especially for the patients seen as suffering from depression, as evidenced by the HOD test.

The patients also are given the benefit of contact with psychiatric social workers who, if necessary, perform further eval-

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uation. They assist in ascertaining the existence and nature of various difficulties such as intrapersonal, marital, and family problems, and social difficulties; and, if need be, they assist in job placement. The psychiatric social workers also hold group therapy sessions for these patients while they are in the hospital; and members of Alcoholics Anonymous help by holding AA meetings in the hospital setting.

All the previously mentioned facets to the program tend to lend support to the patient. Another supportive measure, used for those patients who are interested/ is that of providing the book, **Body, Mind and Sugar** by Abramson, E.M., and Pezet, A.W., Holt, Rinehart and Winston, New York, 1951, which explains the nature of hypoglycemia and gives insight and knowledge about the condition. All

this tends to solidify the entire concept in the patients' minds and gives to them the reassurance they so desperately need.

One case that is brought to mind is that of a young man who had been hospitalized at 10 different psychiatric institutions with no resultant solution to his problem. When he came to us he was diagnosed as having functional hypoglycemia and was given the book **Body, Mind and Sugar** to read about 6 p.m. one night. The following morning, when rounds were made at 7 a.m. he was sitting up reading the book and had stayed up all night. When questioned as to why he had such an avid interest in the book, he stated with more than a little relief that it was as though he were reading his own biography. Cases such as this one give us the impetus to continue to elaborate and refine our treatment

### DIET FOR FUNCTIONAL HYPOGLYCEMIA

On arising—Medium orange, half grapefruit, or 4 ounces of juice.

Breakfast- Fruit or 4 ounces of juice, 1 egg with or without two slices of ham or bacon; only one slice of any bread or toast with plenty of butter; beverage.

2 hours after breakfast—4 ounces of juice.

Lunch-Meat, fish, cheese, or eggs; salad (large serving of lettuce, tomato, or Waldorf Salad with mayonnaise or french dressing); only one slice of any bread or toast with plenty of butter; dessert; beverage.

3 hours after lunch-8 ounces of milk.

1 hour before dinner—4 ounces of juice.

Dinner- Soup if desired (not thickened with flour); vegetables, liberal portion of meat, fish, or poultry; only one slice of bread if desired; dessert; beverage.

2-3 hours after dinner—8 ounces of milk. -

Every 2 hours until bedtime-4 ounces of milk or small handful of nuts.

Allowable vegetables - Asparagus, avocados, beets, broccoli, brussel sprouts, cabbage, cauliflower, carrots, celery, corn, cucumbers, egg plant, lima beans, onions, peas, radishes, sauerkraut, squash, string beans, tomatoes, turnips.

Allowable fruits-Apples, apricots, berries, grapefruit, melons, oranges, peaches, pears, pineapple, tangerines.

May be cooked or raw, with or without cream, but without sugar; canned fruit should be packed in water, not syrup.

Lettuce, mushrooms, and nuts may be taken as freely as desired.

Juice-Any unsweetened fruit or vegetable juice, except grape juice or prune juice.

Beverages-Weak tea (tea ball, not brewed); decaffeinated coffee, coffee substitutes. May be sweetened with saccharin.

Desserts—Fruit, unsweetened gelatin; junket (made from tablets, not mix).

Soft drinks-Club soda, dry ginger ale.

AVOID ABSOLUTELY-Sugar, candy, and other sweets, such as cake, pie, pastries, sweet custards, pudding, and ice cream.

Caffeine - Ordinary coffee, strong brewed tea, beverages containing caffeine. (Your doctor will tell you what these are).

Potatoes, rice, grapes, raisins, plums, figs, dates, and bananas.

Wines, cordials, cocktails, and beer.

protocol and program.

The fully recovered patient is discharged from the hospital with all the necessary materials, medications, and information needed to sustain recovery; and a return appointment to see us for follow up is established prior to discharge. At this time, the patient is also given all pertinent information concerning Alcoholics Anonymous meetings in the area, and is strenuously urged to attend. Follow up for these patients is done by ourselves in conjunction with the psychiatric social workers and members of AA. The entire program outlined here provided the medium for substantial and rapid recovery and provides the means for sustaining recovery.

Our treatment for outpatient alcoholic\* is

basically the same as that outlined for inpatients with the exception that intravenous solutions of vitamins are not given. All the testing and medication formats previously outlined are utilized for outpatients also, in order to give them the same opportunity for sustained recovery as is given the hospitalized alcoholic.

PFEIFFER, C.C: Observations on the Therapy of the Schizophrenias. Revised 1973, New Jersey Neuropsychiatric Institute, Princeton, New Jersey.

**Dr. Carl Pfeiffer is now the Director of the Brain Bio Center at Princeton, New Jersey.**

**Information on the above references in his new book. Mental and Element Nutrients, Keats Publishing, Inc., 1975.**

**Copies may be obtained by writing to Brain Bio Center.**

## REFERENCES

SALZER, H.M.: Relative Hypoglycemia as a Cause of Neuro-psychiatric Illness; rep. fr. the Journal of the National Medical Association, Vol. 58, No. 1, pp. 12-17, January, 1966.

Special Committee of the Diet Therapy Section, American Dietetic Association. Guidelines for Nutrition Care of Alcoholics During Rehabilitation, American Dietetic Association, 620 North Michigan Avenue, Chicago, Illinois, 1971.

KELM, H., HOFFER, A., and OSMOND, H.: Hoffer-Osmond Diagnostic Test Manual. Saskatoon, Sask., October, 1967.

PFEIFFER, C.C, SOHLER, A., JENNEY, E.M., and ILIEV, V.: Treatment of Pyroluric Schizophrenia (Malvaria) With Large Doses of Pyridoxine and a Dietary Supplement of Zinc, J. Ortho. Psych., Vol. 3, No. 4, 1974.

PFEIFFER, C.C, and ILIEV, V.: A Study of Zinc Deficiency and Copper Excess in the Schizophrenias. International Review of Neurobiology. Academic Press, Inc., New York, pp. 141-165, supplement 1, 1972.

PFEIFFER, et al.: New Jersey Neuropsychiatric Institute, Princeton, New Jersey.