

# Role of Diet in People-Work: Uses of Nutrition in Therapy with Substance Abusers

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*For as the distraction of the mind, amongst other outward causes and perturbations, alters the temperature of the body, so the distraction and distemper of the body will cause a distemperature of the soul; and 'tis hard to decide which of these two do more harm to the other.*

## **-Robert Burton, 1628 Introduction**

From surveying the treatment literature, it is clear that nutritional factors and other related physiological considerations are generally overlooked or neglected in treatment planning and implementation. Instead, psychological treatment dominates alcohol and drug rehabilitation. There is a substantial bias in individual and group counseling that emphasizes intrapsychic conflict, problems of socialization and coping, relationships, authenticity, and other psychosocial variables. This practice has been aptly described by Wallace (1972):

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*. . . The symptomatology of the illness under scrutiny is assumed to be motivated behavior expressive of psychological conflicts and to some degree effective in reducing tension and anxiety; the symptoms are "interpreted" in terms of some deductive schema intended to lay bare the (usually assumed to be unconscious) conflicts ... This procedure almost completely neglects the victim's body; or, rather, it attributes to the victim's psyche a virtually magical ability to control the state of its body, by uncritically assuming that almost any somatic expression can be satisfactorily explained merely by asserting a plausible concomitant intrapsychic conflict . . . Thus, even with regard to syndromes familiar to Western clinicians and conventionally (if not invariably) conceived as functional in etiology, the assumption that biological determinants are negligible is becoming an increasing hazardous one to make. (p. 364)* In this paper we intend to review biological, diet-related factors frequently neglected in treatment, and we will present examples of how nutrition is integrated into the counseling process in a small, semi-rural alcohol and drug treatment program.

## Background

### Inborn Errors of Metabolism

Nutrition and other diet-related metabolic processes have long been known to affect physical, cognitive, and emotional functioning. In 1908 A. E. Garrod introduced the concept of "inborn errors of metabolism," which referred to those congenital disorders characterized by an enzyme defect generally resulting in physical and intellectual impairment (Stan-bury et al., 1966). Phenylketonuria (PKU) is a fairly common example of an inborn error of metabolism, a "missing enzyme disease" (Jackson, 1973). In normal metabolism the enzyme phenylalanine hydroxylase converts the amino acid phenylalanine into tyrosine. In PKU this conversion is incomplete because the enzyme is missing. The result is a form of autointoxication in which the body produces various chemicals having a deleterious effect on the brain. If detected early enough, very often this condition can be controlled by scrupulous attention to diet (Knox, 1966). PKU is an instructive model of the potent effects of metabolic "errors." Many other enzymatic defects have been discovered, serving as reminders that microscopic physiological processes often have profound behavioral consequences.

The early work of Garrod and subsequent work on biochemical individuality (Williams, 1956) have set the stage for Pauling's (1968) concept of "optimum molecular environment of the mind." Without too much distortion, one may summarize Pauling's view by noting that where there is a disorder in thought, behavior, or emotion, there will be a concomitant disorder in the molecular environment of the central nervous system. While the implications of this line of thought are far-reaching, the importance of the internal molecular environment and kindred metabolic processes in the etiology and management of behavioral dysfunction has generally been neglected by most counselors and therapists. The primary exceptions are those therapists who have become identified with the controversial ortho-molecular

movement (Williams and Kalita, 1977; Hawkins and Pauling, 1973). As will be seen, there is a convincing evidence that certain kinds of emotional and behavioral problems are related to various kinds of nutrient deficiency or food intolerance, and these latter conditions may result from inborn errors of metabolism.

### Malnutrition

With few exceptions, starvation and frank vitamin deficiency diseases are now relatively uncommon. Yet up until World War II it was not at all uncommon to find large segments of the population suffering from the debilitating physical and psychological effects of vitamin deficiency. Pellagra is a classic example of a deficiency disease that affects mental and emotional behavior, even in the early stages of niacin deficiency, prior to the manifestation of gross symptoms (Spies, 1947). Although pellagra was epidemic in the southern states and in parts of the north after 1908, the widespread fortification of flour and other changes in dietary patterns made pellagra a rarity in the U.S. following World War II (Etheridge, 1972; Roe, 1973). When it was discovered that niacin could alleviate the suicidal depression and confusion which accompanied the bizarre behavior in pellagrins, many physicians began to reexamine their psychogenic frameworks: biological factors were important in many kinds of problems formerly regarded as strictly "mental problems."

In a lengthy review article, Bell (1958) wrote: *That the nutritional status of an individual may affect his psychological well-being appears to be demonstrated by experimental evidence which has accumulated during the past two decades, (p. 47)*

Others were not so reserved and circumspect in their observations. Watson (1956) in a paper rhetorically titled "Is Mental Illness Mental?" draws two conclusions from a summary of experimental evidence on the relation between nutritional factors and personality disturbances: (a) *Some states which are psychologically diagnosed as functional mental*

*illness may originate from nutritional deficiencies, and (b) Some states which are psychologically diagnosed as functional mental illness may be relieved by appropriate nutritional therapy,* (p. 326) Yet only in the treatment of the more severe stages of disability, during detoxification, does one typically find nutritional problems routinely being addressed (Leevy, et al., 1971; Vitale and Coffey, 1971; American Medical Association, 1977; Seixas, 1971).

It would appear as if treatment and rehabilitation staff assumes (a) that once detoxification takes place the client's ordinary patterns of eating will automatically fill all nutritional needs; and (b) that one's customary dietary practices are irrelevant to one's mental and emotional behavior in the post-detox treatment phase. Both of these assumptions are erroneous and represent the conventional view that special attention to nutrition is important only in catastrophic circumstances (Kalita, 1977).

Quite possibly the controversy surrounding the role of nutrition in the etiology of alcoholism has generalized and cast doubt on the role of nutrition in treatment (Jellinek, 1960; Popham, 1953). Yet there can be no doubt that it is well substantiated that many conditions reflecting complex biochemical individuality contribute to the development of vitamin and mineral deficiencies which affect behavioral functioning.

Similarly there can be little doubt that the casual and chronic use of alcohol and other drugs leads to widespread vitamin and mineral deficiencies. Problems of nutrient metabolism, absorption, and utilization occur as frequent side effects of many of the commonly prescribed pharmaceuticals, OTC preparations, and recreational drugs. Roe (1976) has compiled an extensive summary of these nutrient/drug interactions and concludes that drug-induced nutritional deficiencies may be the single most frequent cause of malnutrition in America today.

### **Hypoglycemia**

The hypoglycemic response was first

identified by Seale Harris (1924). He called it "hyperinsulinism" and noted that the various symptoms accompanying this blood-sugar anomaly could be alleviated by dietary treatment.

During the period subsequent to Harris' report, hypoglycemic symptoms have been clinically and experimentally linked to several diseases, including pancreatic cancer (Freinkel, 1975; Meiers, 1973). However, the condition known as relative or functional hypoglycemia, low blood sugar occurring in the absence of organic disease, is subject to much controversy. In the opinion of many, if not most, physicians, functional hypoglycemia is a popular "non-disease," a condition resulting from a rather neurotic "misattribution." According to this interpretation the patient accounts for the symptoms by means of an incorrect system of explanation, a misattribution usually derived from friends, relatives, or magazine articles which feature the disease of the month. "Rather than endure a 'psychologic' or otherwise stigmatizing condition, the patient may suffer a respectable metabolic illness and enjoy the corresponding status and privileges " (Yager and Young, p. 907, 1974). Cahill and Soeldner (1974) agree with this view and offer an alternative diagnosis, "clinical pseudo-hypoglycemia," but they offer no clear criteria to differentiate the two phenomena.

While there is controversy surrounding the prevalence of "true" hypoglycemia in the general population, several clinicians and investigators have reported unusually high rates of hypoglycemic conditions in alcohol-dependent populations. Meiers (1973) states: *There are some conditions that are not purely psychiatric in which there is an extremely high incidence of hypoglycemia. A few of these are alcoholism, peptic ulcer, and asthma. In my own experience, it occurs in 95% of alcoholics,* (p. 454) Milam (1974) claims to find a high percentage of alcoholics with hypoglycemia in his inpatient treatment program, and such claims are widely reported in the popular literature (Fredericks and Goodman, 1969).

Unfortunately, these clinical observations are not supported by an appreciable body of research on hypoglycemia in alcoholics or other drug-abusing populations. Indeed, research on hypoglycemia in these populations is virtually nonexistent, with the single exception of ethenol-induced hypoglycemia, a well-documented phenomenon (Arky, 1971; Freinkel, 1975). In a recent report Poulos et al. (1976) compared 50 outpatient alcoholics and 50 halfway house patients with a control group of nurses and teenagers. Of the 100 alcoholics, 96 were diagnosed as hypoglycemic, while only 14 of the nonalcoholic controls were hypoglycemic. Despite these suggestive findings, the study has serious flaws. The authors omitted details of experimental procedure, quantitative comparisons of blood sugar determinations, or other experimental data, making interpretation quite limited and inconclusive.

One leading proponent of the ortho-molecular movement considers hypoglycemia to have been misclassified: *Relative hypoglycemia has been considered a disease, but I believe it is more appropriate to consider it an abnormal laboratory test indicative of disturbance of carbohydrate metabolism. I consider it a symptom of the saccharine disease* (Hoffer, p. 15, 1977). The saccharine disease stems from the consumption of excessive amounts of sugar and has been linked to obesity, digestive disorders, diverticulitis, cancer of the colon, periodontal disorders, cardiovascular disease, in addition to disturbances of carbohydrate metabolism (Cleave, 1975).

Randolph (1976) adds a precautionary note to the interpretation of functional hypoglycemia. He finds

*more consistently satisfying results from treating the manifestations of hypoglycemia as an allergic response to multiple specific foods,* (p.

114) Glucose-tolerance tests and food allergy ingestion challenges often employ corn sugar glucose. Both procedures may provoke hypoglycemic reactions, but the reaction may be due to the individual's special susceptibility to corn.

*In other words, symptoms occurring in the course*

*of performing glucose-tolerance tests may not be specific for hypoglycemia.* (Randolph, p. 115, 1976)

### **Food Allergy and Intolerance**

According to Corwin (1976), "There is no such thing as a universally safe food" (p. 122). If one is sensitive to the varied manifestations of allergic reactions to foods, it becomes both simplistic and misleading to imply that all "health foods" are good and curative, while nonorganic foods are uniformly noxious. On the contrary, so-called natural, unrefined foods are not necessarily salubrious or curative, nor are refined foods totally debilitating. "To a given individual, any food in any of these categories may be severely damaging" (Corwin, p. 122, 1976). To contradict a current advertisement, every body does not need milk, particularly since milk and milk products are high on the list of foods provoking intolerances and allergic reactions (Rowe, 1972). Other widely used allergenic foods include wheat flour and other gluten-containing grain, corn, eggs, and the chocolate-cola-caffeine triad (Speer, 1970).

Some food allergies and intolerances appear to be inherited and have much in common with inborn errors of metabolism. They may contribute to a constellation of chronic symptoms once thought to be "psychosomatic." As a recent textbook on nutritional therapy points out, many people formerly diagnosed as hypochondriacs or neurotics are in fact allergic to common foodstuffs (Robinson and Lawler, 1977).

### **Caffeinism**

There is growing consensus that daily overdoses of caffeine by law-abiding adults constitute one of the most widespread and least-acknowledged forms of drug abuse. Long-term heavy use creates tolerance, and coffee addicts regularly report withdrawal effects when deprived of the drug (Brecher, 1972). Many people are allergic to caffeine (Dickey, 1976), and it is well-documented that even in small doses, caffeine stimulates the adrenals, increases hormonal activity,

raises the blood sugar level, and impairs psychomotor performance (Robertson et al., 1978; Nash, 1966).

Greden (1974) identified caffeinism as an ubiquitous clinical syndrome characterized by intensified feelings of anxiety, apprehension, and irritability, and by physical symptoms of tachycardia and tremor. Greden suggests that reducing or eliminating coffee intake in such cases might minimize the tendency to prescribe another drug to offset the effects of caffeine. In a more recent study, Greden et al. (1978) conclude: *The message of this study for clinicians is that caffeinism probably can be found among a fairly large percentage of patients with psychiatric symptoms, especially those presenting mixed anxiety/depression profiles. Such subjects will only be identified, however, by history taking. Without inquiry there will be no diagnosis; without diagnosis there will be no relief.* (Greden et al., 1978) But this notion is evidently not an idea whose time has come. Considering the fact that caffeine is a physiological stressor which causes or augments physical and psychological symptoms, it seems odd that one seldom finds discussion of this diet-related factor in reports on counseling processes. Perhaps this omission should be expected in view of the fact that the coffee intake of staff often equals or surpasses that of the patients (Winstead, 1976). As frequently noted, we tend to protect our own favorite addictions.

### **Ruminations**

It is curious that none of the foregoing diet-related factors is discussed in any detail in textbooks on alcoholism, abnormal psychology, adjustment, diagnosis, techniques of counseling, and psychotherapy. With few exceptions (e.g., Robinson and Lawler, 1977), the role of diet in mental and emotional problems has been equally ignored in nutrition textbooks. At the same time, as we have seen, there has been a plethora of reports scattered throughout the literature for the past 70 years, clearly describing the diagnosis and treatment of nutrition-related intellectual, emotional, and behavioral dysfunction. We

maintain not only that attention to diet-related factors might enhance the therapeutic process, but that in some cases "psychological" therapy alone is futile when behavioral problems stem from biochemical processes.

### **The Counselor's Role**

In our treatment program, diet is an indispensable part of a biosocial framework for treatment. It is frequently difficult for the client to believe that his drinking and emotional discomfort may be related to his eating patterns. Before most clients are willing to alter strong entrenched dietary habits, they must be convinced that the change will be worth the effort. During the initial sessions, it is the counselor's role to explore the possibility that there may be a connection between the client's eating habits and his life problems. This can be done by reviewing the client's hereditary background, present diet, and presenting symptoms.

### **Heredity**

During the initial evaluation, it is important to ask if, to his knowledge, he has a close relative (mother, father, sister, brother, aunt, uncle, grandparent), who suffers from alcoholism, diabetes, mental illness, or allergies. There is growing evidence that all of these disorders may occur in individuals who have genetic susceptibility to metabolic dysfunction. The presence of such family history is not conclusive proof that the client's current problems are related to errors of metabolism or other genetic factors. But such a family history is an indicator of high risk. In our clinical practice, it is unusual to find an alcohol or drug-abusing client who does not report a family history of at least one of the hereditary conditions.

It is obvious that nothing can be done to change a person's heredity, but it is possible to manipulate the client's diet and other contributory environmental stresses to compensate for possible metabolic errors.

**Diet**

Alcohol- and drug-abusing clients usually report many of the symptoms listed in Table 1(a) even when they are alcohol and drug free. These symptoms may become overwhelming. We have found that clients suffering from these symptoms usually have a diet similar to that described in Table 1(b).

When evaluating a client's eating patterns, it is important to ask specific questions such as:

- What did you have for breakfast today?
- How many cups of coffee have you had today?
- How many times did you eat yesterday?

General questions such as "How is your diet?" usually elicit a one-word response: "Fine."

Clients who report symptoms similar to those in Table 1 (a) and who also eat irregularly and consume sugar, coffee, alcohol, and junk food, are asked to follow a diet as outlined in Table 2.

The recommended diet is not a high-protein, low-carbohydrate diet, or a natural, organic diet. It does not specify portion size, which fruits and vegetables to eat, or fat intake. However, clients report it is easy to understand and follow, and it is usually a vast improvement over previous eating habits. Food preferences are learned and difficult to alter. Consequently it is not usually a good idea to suggest to a client that he begin eating foods that are totally different from what he is used to, because he probably will not do so for any length of time. Changes can be suggested within the

framework of the client's present eating pattern. Generally a new diet must be implemented gradually. Clients who are overwhelmed by the idea of totally altering their eating habits may be persuaded to experiment with eliminating coffee for two weeks, or having three balanced meals a day for a month.

Over a period of several weeks, a client will be given nutritional information and will be encouraged to follow the complete dietary program. The counselor helps to devise a diet program tailored to each individual's specific needs. It may be important to help the client to plan menus and to also provide pertinent reading material. The counselor also asks the client to keep journals of everything she eats for a period of one to two weeks and to also make short notes concerning how she feels during this time. Together, they review the food intake journals at the beginning of each counseling session, and the client is encouraged to stick with the diet.

Dietary counseling must take into account not only the beneficial nutrient aspects of food, but also the possibility of food intolerances or allergies. Food allergies can produce not only physical symptoms, but confusion, irritability, neurosis, behavioral dysfunction, even psychosis.

As noted in the previous section, it is possible to develop a sensitivity to any food, but usually allergies develop to foods that are consumed frequently. Clients who fail to

TABLE 1

Symptoms and Typical Diet

	I(a) Symptoms		Kb) Typical Diet
Depression	Weight problems	No breakfast, or	Heavy consumption
Nervousness	Tiredness-weakness	high-sugar breakfast	of:
Anxiety	Dizziness-faintness		Sugar
Craving for sweets	Morning nausea	Skipped meals	White flour
Craving for alcohol	Blurred vision		Caffeine
Irritability	Transient muscle	Light eating during	Salt
Rages	aches	day	Alcohol
Feeling of doom	Transient joint pain	Heavy eating at night	Tobacco
Insomnia-nightmares			Junk food
Headaches		Refined carbohydrate snacks	Packaged food

## NUTRITION IN THERAPY WITH SUBSTANCE ABUSERS

**TABLE 2**

### Recommended Diet

#### Basic Rules:

1. Eat at least three evenly spaced, well-balanced meals per day.
2. Consume adequate protein daily. (Rule of thumb to determine protein needs: desired body weight divided by 2 = grams of protein daily). Protein may be of animal or vegetable origin.
3. Consume fresh fruits and vegetables daily.
4. Use only whole grains. Include legumes and nuts.
5. Totally eliminate: sugar (white, brown, raw turbinado, syrup, honey, molasses, etc.), white flour, white rice, alcohol.
6. Use sparingly: salt, dried fruit, coffee, tea, tobacco.
7. Suggested: fruit, vegetable, or protein snack between meals and before bed.

#### **Foods to Favor**

Lean meat

Fish

Poultry

Eggs

Milk

Cheese

Plain yogurt

Whole grains

Fresh fruits

Fresh Vegetables

Legumes

Nuts, seeds

Herbal teas

#### **Favorite Foods to Use**

#### **Moderately**

Sweet fruit and vegetable juices.

i.e., carrot, grape apple, or orange juice

Dried Fruit

Salt

#### **Foods to Avoid**

Sugar— white, brown, turbinado.

Raw

Honey, molasses

Corn syrup

White flour

Cakes, cookies, pies, pastries,  
doughnuts, candy

White bread

Breakfast cereal, commercially  
made granola

All soft drinks

Fruit-flavored drinks

Ice cream Flavored yogurt

Canned fruit

Canned Vegetables

Processed or prepacked food

Coffee, Tea

Alcohol

#### Common Sense Suggestion

1. Overweight? Follow basic rules, but limit fat intake and portion size.
2. Balance meals with protein foods, fruits, vegetables, and unrefined starches.
3. Observe how you feel. Don't eat anything that later makes you feel bad.

#### What is a Gram of Protein?

1 Egg - 6 grams protein

1 oz. Milk - 1 gram protein

1 oz. Meat = 6 grams protein (approx.)

1 inch cube Cheese - 4 grams protein (approx.)

respond to the recommended diet may be suffering symptoms that are produced by allergies. Eliminating sugar will not alleviate distress caused by sensitivity to wheat or milk.

Several methods for determining food allergies are, (1) referral to a physician for skin testing, (2) a four-day fast followed by challenge with the suspected food, (3) elimination diets (Rowe, 1972). Foods that are most likely to cause an allergic response are sometimes those consumed in large

quantities (Randolph, 1956). The client's food journals are invaluable at this time.

Because the biological substrate has been neglected in treatment, we have purposely avoided discussion of other therapy techniques. Obviously dietary factors are not the only significant elements in the therapeutic smorgasbord, where one man's meat may be his neighbor's allergen. One may drink quarts of coffee, smoke cartons of

cigarettes, and eat pounds of sugar and, despite these insults to the body, still function in society. Nutritional counseling is not the sole salvation for the substance abuser. There are many ways to stay sober, many paths to a drug-free existence.

If one uses nutrition as an adjunct to counseling, one should keep in mind that there is no simple, quick, magic nutritional cure for alcoholism, drug abuse, and emotional problems. However, there is much evidence to suggest that attention to dietary factors may help the client more adequately deal with problems and render the counseling process more efficient, productive, and rewarding. As one client said, "I used to feel crazy all the time. Now I only feel that way when I cheat on my diet. I know how to control that. It sure makes it a whole lot easier to stay sober."

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## NUTRITION IN THERAPY WITH SUBSTANCE ABUSERS

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