

# Orthomolecular Nutrition:

## The Missing Model

### for the Management of Child Abuse

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#### The Model, the Problem, the Theory Base

I wish to present a new model for child abuse management: Orthomolecular Nutrition. It is a model which gives prominent recognition to the concept that noxious nutrition is a major cultural root of behavioral aberrations, a recognition which provides instant leverage on a large segment of the child abuse problem since it steers the course to practical options for prevention and therapy. A welcome advantage of this model is that it does not compete with nor render obsolete other useful models of child abuse treatment and prevention. Rather it tends to enhance these efforts by facilitating client allegiance to the rehabilitation task, by abbreviating the duration of treatment, and by diminishing recidivation. It has other virtues. It provides a simple, low cost, specific, essential and client-acceptable aid not only to therapy but also to prevention with high-risk families even before the overt outbreak of abuse.

Stedman's medical dictionary defines Orthomolecular as "designating the normal constituents of the body, including

substances formed endogenously and those acquired through diet." The term achieved wide usage after Linus Pauling, in an article entitled "Orthomolecular Psychiatry"(1968), elaborated the notion that the functioning brain is affected by the molecular concentrations of many substances that are normally present but that optimum concentrations may not always be achieved because a person's diet and genetic machinery are unable to provide these optimum concentrations. Also, since the brain is more sensitive than the rest of the body to any deficiency, suboptimal concentrations result in a cerebral deficiency which manifests itself in mental disorders. He pointed to the accepted correlation between mental disease and low concentrations of particular vitamins such as thiamin (B1), niacin and niacinamide (B3), biotin (H), ascorbic acid (C), and folic acid, and of abnormal concentrations of other substances such as L(+)-glutamic acid, uric acid, and y-aminobutyric acid. The therapy now referred to as Orthomolecular was started as megavitamin B3 therapy more than twenty years ago by Hoffer and Osmond. Today Orthomolecular therapy encompasses refined diagnoses and the use of a variety of specific vitamins, minerals, amino acids and enzymes, plus techniques for identifying and ridding the body of toxic substances.

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Before demonstrating how this therapy model operates to solve the child abuse problem, let me first delineate the problem itself and categorize the theory on which the model is established.

Child abuse manifests itself in four ways, in:

1. Impulsive, physical violence which may be repeated unpredictably.
2. Planned, chronic, unremitting sadism with paranoid overtones.
3. Neglect and deprivation in any or all areas such as physical, basic nutritional, psychological.
4. Sexual abuse: incestuous and non-incestuous.

Three of these four behaviors, violence, sadism, and even sexual exploitation can be readily recognized as forms of aggression. Neglect too falls under this rubric if understood as a form of "passive aggression." What theory provides both an understanding of the emergence of this aggression and a practical, effective therapy model for controlling it?

Ethological instinct theory and the psychoanalytic theory of aggression have been unable to provide pragmatic models of therapy. Ethological theory can generate only such strategies as separation of parent and child, incarceration or other absolute control of the aggressor, and the burdensome difficulty of child placement. Psychoanalytic therapy, individual or group, has proved cumbersome, non-productive. Abusers tend to deny any mental defect or unconscious motivation. This impediment to change is compounded by the fact that so many therapists view their child abusing clients as "mentally normal."

Social learning theory, even though not free of defects, nevertheless has succeeded in generating a model which has produced heuristic concepts such as the relationship between loss of self-esteem and aggression, the importance of nurturant models, of role imprinting, of the misuse of the child as a nurturant source for the parent, of the need for specific training in parenting, of the disorganizing impact of constant change. Its most productive strategies are parent-effectiveness training and extended family

support services. It is still, however, considered rudimentary in its application to the diffuse field of child abuse, lacking any diagnosis, specific goals or treatment plan. "Calling all these diverse people neglectful — as if that provided a diagnosis — is simply incredible. Therefore one looks for a listing of diagnostic types....The literature on neglect as it is today, offers very little help." (Polansky, Hally, Polansky, 1975). What is called for now is a sound scientific theory of aggression and violence.

The research on violence as an expression of brain functioning has been systematic I v reviewed (Goldstein, 1974; Yaryura-Tobias, 1978). Rage reactions have been demonstrated ' by means of ablation, electrical stimulations, shock, hormones, isolation, crowding, by drugs that raise catecholamine levels, and by protein malnutrition. Aggression has also been linked to the XYY genotype but this tie has been effectively disputed.

In every instance rage reactions and their opposite, calmness, are accompanied by alterations of the levels of certain brain chemicals. These chemical variations while extremely complex and not yet fully elucidated do show some consistencies. According to Goldstein (1974), "Cholinergic mechanisms appear primarily involved in facilitating or triggering the central neural networks mediating predatory aggression. Acetylcholine also appears to facilitate affective aggression. The roles of dopamine and serotonin are unclear. Dopamine appears to act like norepinephrine, facilitating affective and inhibiting predatory aggression. Serotonin appears to be inhibitory for both classes of aggression."

It is these consistencies which support the rationale for the use of empirically developed pharmacological agents and for the use of Orthomolecular therapy.

The keynote difference between pharmacological and Orthomolecular treatment is that psychotropic drugs, while rapid in action, only suppress symptoms and after long-term use produce irreversible body-destroying side-effects whereas

orthomolecular therapy, although, slower in action, meets the person's special nutritional needs in accordance with his individual chemical make-up, and leads to a state of normalcy that most people proclaim they have never before known.

### **The Model Applied to Four Types of Abusers**

Let us see now with what specificity Orthomolecular methods would deal with the biochemical imbalances of the four types of child abusers, the impulsive beater, the chronic sadist, the neglecter, and the sexual assaulter/exploiter of children. I will provide a descriptive and chemical diagnosis and then a treatment program such as might be effectual for each of the four types. I. The Impulsive Beater

This behavior is lately being termed The Episodic Dyscontrol Syndrome. It is characterized by diffuse violence, that is, violent outbursts at varied targets, walls, furniture, people, self, etc., with no alteration in consciousness. Specific behavioral expressions of episodic dyscontrol syndrome that have been noted are: physical assault, especially "wife and child beating, senseless violence following intoxication, or following only a small amount of alcohol, sexual assaults, and a history of many traffic violations and serious automobile accidents. There is a consensus that with this syndrome a brain dysfunction is present.

What would be the unique Orthomolecular approach to the management of patients that fit this category? The aim would be to treat the brain dysfunction that accompanies the rage.

It is a well-established observation that convulsions correlate positively with two physical states: hypoglycemia (low blood sugar) and pyridoxine (Vitamin B6) deficiency. If the hypoglycemia is sufficiently low so as to produce dysrhythmia, an outburst of aggressive behavior can be precipitated. In their study, "Violent Behavior, Brain Dysrhythmia, and Glucose Dysfunction, A New Syndrome," Yaryura-Tobias and Neziroglu (1975) were able to show that violence disappeared when the Vitamin B6 deficiency and the

hypoglycemia and dysrhythmia were treated. They suggest that the triad, violent behavior, brain dysfunction and glucose dysfunction, is related to a disturbance in tryptophan metabolism subsequent to a glucose imbalance perhaps related to insulin output.

Pfeiffer notes that people who are particularly susceptible to stress manufacture significant levels of the chemical, kryptopyrrole which antagonizes the stores of B6 and zinc resulting in dysperceptive schizophrenia and neurological metabolic symptoms. These people can be distinguished by a complex of recognizable features: white spots on the nails (a sign of zinc deficiency), inability to remember dreams (B6 deficiency), fetid breath and body odor (presence of kryptopyrrole), left upper quadrant abdominal (splenic) pain, knee pains (improper cartilage development), stretch marks on the skin (Pfeiffer, Iliev, Goldstein, 1973).

Therefore, to treat the brain dysfunction, the Orthomolecular clinician might confirm a pyridoxine (B6) deficiency with a test for kryptopyrrole whose presence in the urine is tantamount to a B6 and zinc deficiency since kryptopyrrole leaches these two substances out of the body. Megadoses of the deficient vitamin would be started. The hypoglycemia of this patient could be treated with chromium (said to be destroyed by sugar because insulin uses it up), brewers yeast (which contains the glucose tolerance factor), with a hypoglycemic diet and an investigation of possible allergies to specific food and environmental substances which have also been shown to precipitate hypoglycemia not directly attributable to excess sugar/simple carbohydrate intake and insulin defect. Since this connection between allergies, hypoglycemia and episodic dyscontrol is so important yet little known, let me present a few examples of the assortment of emotional reactions to foods that range from hyperactivity, over-talkativeness, scolding, grouching, crying, slapping, fighting, to violent behavior (Philpott, 1976). 1. A twenty-year old became so violent after smoking a single cigarette, it took

four men to subdue him. He had been entirely well until he started smoking with friends at college.

2. A 52-year old depressed woman, tested for wheat, "felt like hitting or punching someone."
3. A 12-year old girl grabbed and broke her mother's glasses during a food reaction. After another food she picked up a rock and attempted to hit someone.
4. A 20-year old felt like choking his mother. Another patient's response to petrochemical hydrocarbons was attempted suicide.

In Orthomolecular therapy, these allergies are dealt with by eliminating the offending substances, by desensitization procedures and by strengthening tolerance through other management methods. Thus, the sudden expression of violence directly attributable to the allergies is totally eradicated, whereas with other forms of treatment the chemically stimulated drive to erupt remains unmodified.

Another chemical imbalance which may correlate with uncontrollable behavior may be a patient's abnormal histamine level. Histamine is found in nearly all body tissues and in all nerve cells. Its distribution in the brain parallels serotonin and norepinephrine and it is spoken of as a putative neurotransmitter.

The literature describes a high histamine type and a low histamine type (Pfeiffer, 1974). Hypomanics tend to be among the high group and as such are argumentative and assaultive when not suicidal and having a "blank mind." Pfeiffer suggests that their high sex interest and rapid sexual response may be the result of an elevated level of histamine in the genitals. Addicts and alcoholics tend to fall into this category too. Orthomolecular treatment is directed toward their overstimulated condition, their insomnia. They need histamine releasing agents such as calcium and profit from zinc and manganese supplements, and generally they require a hypoglycemic diet.

Uncontrollable aggressive, assaultive behavior can also result from central nervous system poisons like lead, so redolent on our highways, and mercury which renders its victims "mad as a hatter." Effective treatment for lead is chelation, calcium, sulfhydryl amino acids as well as zinc with heroic doses of ascorbic acid (Papaioannou et al., 1978; Sohler

et al., 1977). Mercury yields to treatment with the amino acid cysteine and by means of sweat baths. No child-beater should go unexamined for the possible presence of these heavy metals.

In regard to the unresolved issue of psychopathology it is worth observing that it may be the beater in particular who most often gives the impression of being "normal." Between dyscontrolled episodes behavior may indeed be normal but the underlying chemical balance remains precarious. II. The Paranoid Child Abuser

Our second type of abuser shows, instead of periodic outbursts of explosive passion, rather a compulsive control and planned, patterned, ongoing forms of cruelty. An apt example is the father of Genie told in **Genie: A Psycholinguistic Study of a Modern Day "Wild Child"** (Curtiss, 1978). Besides exerting overbearing sadistic control over his blind wife, this man kept the unclad and straight-jacketed Genie totally isolated and bound to her potty chair from the time she was twenty months until she was thirteen and half years old by which time her totally intimidated mother finally took courage to run off with the child.

Another example (Richette, 1970) is the father who forced his daughter to eat food he had urinated upon and to repeat after him, "Good to the last drop." This grotesque mortification continued until a school nurse, suspicious of the girl's constant nausea finally gained the youngster's confidence and elicited the bizarre tale. The schizophrenic thinking that is illustrated here is repeated time and again in the strange cases of child abuse by torture. What these people cannot conceptualize in words they express in action in much the same way as a dream expresses thought by means of images. Revenge against a runaway wife is often the motive for this bizarre abuse of children. A third example (Richette, 1970) is that of a father who kept five children chained to bedposts with only doggy bowls containing actual dog food available to them. This paranoid, when brought into

court, blandly explained 'that their mother was a bitch, and the children no better than animals and deserved to be treated like dogs.' Probably until the court's challenge served to catalyze the formulation of amorphous thought into symbolic language, this dreaming-thought-awake schizophrenic mind could only use action to convey the underlying dream thought. Therapists who understand this form of thinking (Arieti, 1955) have no difficulty in identifying these people as paranoid schizophrenics, and recognizing that the crucial problem is their mental status.

In Orthomolecular diagnosis these paranoid cases would probably be the classic low-histamine type which responds dramatically to the megadose niacin-niacinamide and vitamin C program plus folic acid, B-12 and trace minerals according to individual needs. Since their peculiar thought processes and typical paranoid litigiousness manifested in endless, self-justifying debate preclude any possibility of a psychotherapeutic relationship, the Orthomolecular approach, which sidesteps any discussion of paranoid systems and world-views, offers the most promising route for salvaging these obstructive abusers. III. The Child Neglector

The child neglecter by all reports is as notably difficult to contain and mold as is water between spread fingers. This follows from the fact that many of them may be simple schizophrenics with depressive features and little motivation. Others may show high energy, obsessive compulsive features, aimless racing. All tend to have incredibly poor reality testing, mental confusion, blank mind. In many cases, alcoholism is both a solution and a complication to their problem. An appalling example, again from Richette, is the case of the mother who left two young children and an infant in a filthy vermin-infested hovel with no food whatsoever and then after a four-day alcoholic binge, returned, still intoxicated, but after the infant had died, having been scalded and inadvertently skinned alive by the misguided efforts of the older children to give the baby a bath so as to still its screams of hunger. The crucial point is not the horror of

the tragedy but rather the hopelessness of dealing rationally with this type of neglecter^ lack of reality testing. Richette underscores this lack of insight by citing this woman's typical maneuver to reclaim the children even though she was no more prepared for mothering than before. Orthomolecular treatment, aimed as it would be at the mental illness itself, provides greater hope for rehabilitating a mind that cannot attend, concentrate, understand, remember, learn, and mediate responsible action. One could speculate that this type of neglectful abuser would fall in the high histamine category. The high blood histamine keeps the libido drive overactive. Alcoholics and heroin addicts fall in this group. They find it most difficult to relinquish their food, drug and alcohol compulsions. They sleep little, often suffer from migraine headaches. They are ulcer prone but live long lives if they don't self-destruct by suicide when depressed.

Orthomolecular practitioners use calcium and the amino acid methionine to lower the histamine level, and recommend the avoidance of high tryptophan containing foods, like milk. With these people, zinc is often low and so this is replenished along with manganese.

The alcoholics among them should be treated with super-nutritious hypoglycemic diets and L-glutamine, an amino acid (Williams, 1973). The drug addicts of this group would also be handled in Orthomolecular rather than toximolecular fashion. Libby and Stone (1977) have demonstrated that rapid and complete withdrawal from heroin is effectively accomplished by means of large doses of intravenous sodium ascorbate, vitamin C. Only after the depression or the hypomanic obsessiveness has been lifted through Orthomolecular intervention can parent-effectiveness training begin to mean anything. IV. The Sexual Child Abuser

No matter what form sex abuse takes, whether incestuous or outside the family, seductive or assaultive, whether hetero- or

homo-sexual, one condition can be assumed to exist in every instance, namely a strong sex drive. This, of course, does not imply any virtuosity of performance. Its very opposite may be at least one determinant for the choice of an immature non-critical object. However, what has so often been repeated, axiomatically, about a child-abuser's having been abused as a child does appear to be borne out in the case of the sexual abuser. Here one can accept the notion that the form of sexual expression is a learned behavior (Montagu, 1978), even though the drive itself may be mediated by many interacting influences, brain morphology, as well as chemical, electrical, hormonal and genetic factors.

In the child-abuse literature, the characteristics of the explosive beater are better known than those of the sexual abuser although certainly the abuser's need to use the child as an adult gratifier, common to all child-abusers and neglecters, is here most blatantly obvious. For the most part, the characteristics of the sexual child abuser are precisely those of a narcissist. The narcissist loves no one but himself, exploits anyone who can be used to enhance his fantasy of self-importance and infallibility. He is totally incapable of considering the needs and feelings of the other person who is scarcely real to him. All the world exists to serve him. Therefore, he will not even stimulate himself when alone. Someone else must perform this favor. The sexual child-abuser combines these narcissistic attitudes with historical behavioral imprints and callously and insensibly seeks out the child for this self-serving purpose. The Orthomolecular contribution to the therapy of the sex abuser would have to include several considerations.

First is the possibility that there could be some temporal lobe involvement (Mark and Irvin, 1970). Temporal lobe lesions have been implicated in uncontrollable sexual activity in both animal and man. Kluver and Bucy removed both temporal lobes in a rhesus monkey and it became so oversexed, it mounted other animals and inanimate objects indiscriminately. Mark and Irvin report the case of a woman with a lesion in the right frontal temporal region who exhibited oversexed

activity not unlike Kluver and Bucy's monkey. Therefore, because of its ability to control seizure-like activity, pyridoxine (vitamin B6) might be tried. A high histamine level, which often correlates with high sex activity, if present, would call for histamine-lowering substances. Since sexual behavior follows a drop in serotonin levels, the amino acid tryptophan, but always with the pyridoxine which is needed to metabolize it, might be in order. One could look for hypoglycemia and the very likely presence of alcoholism and treat in ways already mentioned for these. With one sexual abuser that I treated, a pedophile, the use of hypnosis with direct suggestion was an effective, non-toxic way of getting him to avoid young boys altogether.

Admittedly, all these blind diagnoses of four types of child abusers are speculative. But these speculations initiate a new way of looking at abusers other than in psychosocial terms and offer a new direction for testing and diagnosing and treating each individual case.

The treatment specifics covered here are certainly not intended to make instant Orthomolecular therapists out of anyone but rather to show how the proposed model operates and to make it better known that Orthomolecular nutritional therapy is scientific, effective, practical, necessary, more than just chicken soup spiked with geritol, and that the overriding principle is that all four kinds of child-abuse aggressions are triggered by chemical imbalances stemming from unmet nutritional and/or genetic needs and that these needs can be met by matching the biochemical anomalies as far as it is possible at this time, with specific Orthomolecular rather than toximolecular substances. This permits the patient's body to regenerate its anti-stress and coping mechanisms and restores him to a level of cognitive functioning that eases the psychotherapeutic and educational task of parent-effectiveness training.

Ideally, the patient should remain on a sound nutritional program even when supplements, vitamins, minerals, enzymes,

amino acids can be diminished or even discontinued. This implies the avoidance of all junk foods or food artifacts masquerading as foods but having no nutritional value for cell regeneration. These empty calorie foods would be all of "white man's poisons," sugar, white flour, processed foods, alcohol, coffee, insulin-stimulating substances which precipitate hypoglycemia. That sugar can be injurious even to the hospitalized patient being given therapeutic glucose feeding is implied by a report that sugar accelerates the death of brain cells when circulation is diminished, creating "black holes" (Welsh, 1978). Only sound knowledge and sane attitudes toward real nutrition can prevent the Pepsi-degeneration of today's children into tomorrow's aggressive child abusers.

### **Culture Patterns as Adaptations to Malnutrition**

While wishing to deflect such cultural decline and to prevent the metamorphosis of abused into abusers, theorists have despaired of even making an impression on the child abuse problem by means of dealing with individual cases and have looked toward some Utopian alteration of culturally endorsed attitudes to bring about change. The attitudes most deplored are first, our society's apathy toward violence with its sequitur, corporal punishment as a means of child discipline, and second, its indifference toward the spirit of dominance which permits the exploitation of the disenfranchised, the weakest of all these being little children. These attitudes, however, can never be changed unless we recognize, as Foulks and Katz (1977) remind us that **"cultural patterns represent responses to potential malnutrition and may be considered biologically adaptive."** (Emphasis this author's).

Examples of representative cultural responses to malnutrition will clarify the concept expressed in the term "biologically adaptive." Two such instances of interplay between cultural patterns and malnutrition are the grand hysteria of Victorian ladies and the arctic hysteria of the Eskimos. The mental disorder of the Victorian ladies has been diagnosed as the manifestation of a calcium deficiency resulting

from the combination of a lack of exposure to the sun's ultraviolet radiation as decreed by the fashion for concealing clothing including bonnet and parasol resulting in the loss of vitamin D needed for calcium absorption, coupled with diminished dietary calcium stemming from the fact that the Industrial Revolution impeded the distribution of dairy products. The arctic hysteria of the Eskimos, known from Peary's time, has been similarly explained. Heavy clothing, limited months of sunshine and highly carnivorous diet which produces a ketosis that further diminishes the body burden of calcium placed the Eskimo in the same predicament as European hysterical ladies. These hysterical behaviors, both mediated by a calcium deficiency, but somewhat different in their expression have been considered as "adaptive" because the hysterical fits with their accompanying altered state of consciousness provided an otherwise unavailable relief from stress, and a socially and psychologically acceptable way of satisfying unmet needs for attention.

A third example of this feedback mechanism between culturally sanctioned behavior and malnutrition, one more precisely pertinent to our concern with violence is the Qolla Indian society. The Qolla, labelled "the meanest and most unlikeable people on earth" engage in every type of aggression, provoking, fighting, killing, stealing, rape, arson. Their diet is critically low in protein, ruinously high in carbohydrates. Bolton (1978), who tested all males in one village for blood sugar levels and found that fifty percent were hypoglycemic, is convinced that it is by means of their aggression in thought and action that the Qolla try to raise their blood sugar to a bearable level. In this respect, it is not their culture which determines their socially sanctioned aggressiveness, but rather their nutrition which creates the specific culture that condones their adaptation to their dietary deprivation. Thus psychological, physiological and neurological mechanisms, in concert, achieve a homeostasis for the malnourished Qolla.

That homeostasis is experienced as "feeling better," the term used by Bolton to describe the Qolla after a fight. "Feel better" in child abuse idiom may be translated as "self-esteem." The child abuser is invariably characterized as lacking self-esteem and his aggressive act is seen as a means of regaining that esteem. Like with the Qolla, it is probably the abuser's unconscious physiological mechanism for raising his blood sugar level.

Relating this mechanism to today's Western society, one can see how our all too prevalent high carbohydrate and low fiber/protein diet has similar physical, psychological and behavioral consequences. The hypoglycemia resulting from the high carbohydrate intake generates rage and violence as a device for correcting the low blood sugar, and the irritable colon attributed to the low fiber-high sugar intake produces constipation as a physical manifestation of the body's desperate adaptive effort to extract essential but missing nutrients. Thus greed as well as violence can reflect nutritional deprivation.

Another example, one of world-wide social aggression resulting from dietary factors, is a study linking corn consumption and cross-cultural homicidal rates (Mawson and Jacobs, 1978). Measuring these two variables for fifty-three countries the researchers found that those countries above the median in corn consumption (Md = 1.30 bushels per capita) had significantly higher mean homicide rates (10.69 per 100,000 pop.) than countries below the median in corn consumption (4.31 per 100,000 pop.). This is understood to mean that the high consumers of corn which is deficient in tryptophan, the precursor the serotonin, are consequently lacking in that tranquillizing neuroinhibitor of aggression.

### **The Noxious Nutrition-Child Abuse Connection**

With this evidence, for nutrition's being the determinant of aggression for which culture later elaborates a rationale, as a framework, let me present a few findings dealing precisely and exclusively with the nutrition—child abuse connection.

1. Protein malnutrition (Resnick, 1974) results in heightened aggressiveness and early life protein deprivation in particular results in aggressiveness for which even later feeding cannot compensate. The axiomatic principle that the child abuser was once an abused child should read: "The child abuser was once a protein-malnourished child."
2. Protein deprived children who were **not** beaten or physically abused, grow up to be as aggressive and violently assaultive as those who were beaten (Polanskyetal., 1975).
3. It is reported that 50 percent of all incidents of abuse such as beltings, burns, skull fractures take place between 6:00 p.m. and 9:00 p.m. (Justice, 1976). The implication of this behavior-oriented study is that the child's provocativeness is the stimulus to parental ex-plosiveness. But I submit that both child provocativeness and adult explosive-ness are direct expressions of their sensitivities to deleterious substances in the dinner meal, insulin stimulants or allergens.
4. Families where children are abused or neglected show considerably less communication than normal families. Verbal exchange appears lacking (Burgess and Conger, 1978). But the literature shows that for language impaired children, improvement in speech and communication as well as an increase in the pressure to talk follow the administration of pyridoxine, (vitamin B6) (Rimland, 1973). Might not this communication deficiency seen in abusive families be related to a familial genetic need and/or a dietary lack of the speech vitamin?
5. Malnutrition (evil nutrition) adversely affects the child by limiting the development of body, brain and the capacity for emotional control. Schneour (1974) attributes a loss of half of intellectual potential to chronic malnutrition during gestation and the earliest years of life. Nor does this appear to ameliorate

with age despite interventions (Thomson and Pollitt, 1977).

6. Learning disabled children show significantly higher lead and cadmium levels and lower chromium levels than matched peers (Pihl and Parkes, 1977). The destruction of intellect by lead is common knowledge but what is striking here is the low chromium. A chromium deficiency impairs glucose tolerance and amino acid metabolism. Chromium derives from quality protein and sugar destroys it. In this feed-back relationship one can see how these children are nutritionally programmed for behavioral dyscontrol and further mental deterioration. By ignoring specific trace mineral imbalances, the "difficult" child becomes more difficult.
7. In a study that identified high, medium and low consumers of coffee, tea, brown colored soft drinks and sugar among normal Dallas, Texas students, Palmer (1977) found a significant difference in caffeine-sugar abuse between high and low achievement groups, the high caffeine-sugar abusers falling in the low achievement group. Many of the caffeine-sugar abusers had had sugared tea as nurslings.
8. Subclinical levels of lead in subjects never even suspected of having been lead poisoned were deemed to be directly related to their behavior disorder or learning disability. Degradation of hand-eye coordination was clearly seen to begin at only 10 ppm of lead in hair (Moore and Fleichman, 1977).
9. But obtaining good nutrition is a hazard (U.S. Government (1)) from breast to bier. Human breastmilk has been found to be contaminated with carcinogenic pesticides, DDT, dieldrin, and chlorinated hydrocarbons, in concentrations so high that if it were a commercial product, the Interstate Commerce Commission would forbid its transport (Harris and Highland, 1977). Apart from the mother's risk with breast cancer the child is doubly victimized. Where the mother is informed and avoids nursing, the formula-fed babies are subject to a faster weight gain, become more predisposed to adult obesity, diabetes

(Winikoff, 1978) and associated emotional dyscontrol. To add to this insult is the fact that pasteurized cow's milk is many times more lead-contaminated than milk as it comes from the cow. To this source of lead hazard, add also the fact that atmospheric lead is most dense within a few feet off the ground where it gets inhaled by the tots most vulnerable to it. No irritable child nor any child of an abusing family should go unscreened for the possibility of lead contamination (Christain, 1969). These data sound a warning that the nutrition-child abuse connection needs immediate attention, that without the missing ingredient, Orthomolecular nutrition, therapists will continue to render only band-aid ministrations that doom the cause of child abuse and bode ill for the culture that harbors it, a not unrealistic consideration. Evidence that cultures do deteriorate with frightening speed is presented by Weston Price in dramatic photographs recording periodic increments of physical and mental degeneration that beset primitive peoples in many parts of the world after the introduction of Western "civilized" diet, sugar, white flour, processed food artifacts. It is disquieting to note how smiling, handsome, healthy intelligent looking natives give way to carious-toothed, dull-eyed, frightened, ugly and deformed, retarded creatures. To forestall degeneration in our midst, we would be most prudent if, disregarding problems of the broader society, we addressed ourselves with the greatest possible effort to providing a corrective for the nutritional roots of child abuse. The positive hopefulness of this approach is supported by the following data.

### **Optimistic Results of Corrected Nutrition**

Many of the characteristics of the "difficult" abused child, the hyperactive, hostile, destructive one as well as the shy, passive, withdrawn one, and even the childhood characteristics of the abusing parents,

Bed-wetting, fire-setting, and cruelty to animals, all these have at some time been applied to children of non-abusing, nurturing parents (U.S. Government (2); Justice, 1976; Kemp, 1978). However, many of these children have overcome these handicapping characteristics simply by strict adherence to special diets such as the Feingold diet. The Feingold diet specifies the elimination of all artificial colors and flavors as well as the elimination of all salicylate (aspirin) containing foods such as most soft drinks and many natural foods (Feingold, 1973,1974).

Since it is the "difficult" child who is most prone to being abused, it is particularly important that these most "difficult" of children, the autistic (Rimland et al., 1978), the psychotic (Rimland, 1974), the schizophrenic, the retarded, the learning disabled, even the mongoloid (Turkel, 1975) child made greater strides toward normality when appropriately managed with an Orthomolecular nutritional program.

The salutary effect of Orthomolecular nutrition upon violence and criminal behavior is again affirmed in Barbara Reed's testimony before the Senate's Select Committee on Nutrition and Human Needs (U.S. Government (3)). Reed, a municipal court probation officer in Cuyahoga Falls, Ohio, reported her unique program of rehabilitation by means of special diets for probationers of every description including child abusers. She concluded her report (which includes a detailed transcript of the hypoglycemia diet used in her program) with this impressively persuasive comment: "We have not had one single person back in court for trouble who has maintained and stayed on the nutritional diet."

Another optimistic piece of research, this one with animals, suggests that it is possible to break out of the vicious circle of protein malnutrition and high sugar intake even though studies indicate that the selective preference for sweet tasting substances appears to be inborn (Le Magnen, 1977). When deliberately malnourished rats were "educated" by being given a vitamin-containing food for a few days until they could experience the curative and beneficial effects of the therapeutic diet, such

as weight gain and restoration of appetite, these animals thereafter preferred the **food** containing the vitamins to five other available choices. The hedonic effect of good nutrition proved to be self-reinforcing (Young, 1977).

### **Integrating the Model into Existing Programs**

That the uncertain if not gloomy outlook for child abuse prevention and treatment can be dramatically improved by the Orthomolecular nutrition model is clear but where to begin, where to insert it, is a first consideration. The **1977 Analysis of Child Abuse and Neglect Research** (U.S. Government (4)) reviews current primary and secondary prevention programs and treatment programs. All of these available types of services could incorporate some aspect of Orthomolecular nutrition. Primary prevention programs such as education for parenthood, public awareness campaigns, family support services, could educate for an understanding of the connection between nutrition and all behaviors, feelings, coping skills. Training of this type is being offered to families as part of PEP, Preschool Eating Patterns, a program aimed at preventing obesity, created by Helen S. Wright and Anthony R. QyAugelli at the College of Human Development of The Pennsylvania State University. Secondary prevention programs which screen for high risk cases by means of questionnaires, observation and interviews could add to their test devices a hypoglycemia check list, a diet survey, hair analysis for trace mineral deficiencies and other measurements which by revealing specific nutritional needs would greatly amplify the researcher's accuracy in detecting high risk families.

Treatment services too would be perceptibly improved. These services focused on the family unit, have generated little definitive research on the effectiveness of current therapies (U. S. Government (2)). Not only would effectiveness be improved but, also important, the measurement and reporting of that improvement could be made more manageable by including

orthomolecular nutrition as part of the therapy. Portions of the proposed model may be utilized by therapists with little special training. For the incorporation of fuller segments of the model expert Orthomolecular management can be obtained on a consulting basis. Since the Orthomolecular practitioner needs to spend only a limited amount of office time to diagnose and prescribe a nutritional rehabilitation program which can be support-ively supervised within the framework of existing treatment, programs, the ratio of such trained therapists could be even less than one per treatment facility. Information on how qualified professionals may acquire this training is readily available from the Academy of Orthomolecular Psychiatry, 1691 Northern Blvd., Manhasset, N.Y., 11030; the Huxley Institute for Biosocial Research, 1114 First Ave., N.Y., N.Y., 10021; or the Canadian Schizophrenia Foundation, 2229 Broad St., Regina, Saskatchewan, Canada, S4P1Y7.

When a care model of established intrinsic value can be incorporated into existing programs so as to enhance without disturbing the productiveness of other approaches and interventions, it is prodigal not to blend strategies for heightened effectiveness.

### Summary

This paper presents a practical model for the management of child abuse, one based on a scientifically established theory that aggression is an expression of brain dysfunction resulting from biochemical imbalances which this model strives to correct through specific Orthomolecular nutrition. Four kinds of abusers are classified and described, beaters, torturers, neglecters, and sex exploiters, and it is indicated how they may be diagnosed within the framework of the Orthomolecular model.

Beaters, the episodic dyscontrol group, are seen as potentially subject to hypoglycemia, B6 deficiency and dysrhythmia. Sustained torturers are seen as compulsive characters, possible pellagrous paranoid schizophrenics in need of classic B3 therapy. The neglecters are viewed as simple schizophrenics with depressive features and hard to manage poor reality testing

who cannot benefit from traditional therapies without prior Orthomolecular treatment. The sexual abusers are immature narcissists with possibly other anomalies like temporal lobe lesions. Specific Orthomolecular treatment programs are suggested for each type allowing for the fact that such blind diagnoses must be individually confirmed. These treatments include attention to vitamin and mineral deficiencies and dependencies, enzyme defects, high and low histamine levels, food sensitivities and allergies, hypoglycemia and heavy metal intoxication, any of which may be involved in the eruption of episodic dyscontrol. These blind diagnoses are only speculative but they provide a new understanding and new options for management of abusers.

Culture patterns, such as apathy toward violence and exploitation, generally held responsible for child abuse, are shown to be adaptations to noxious nutrition, the behavioral expression of which maintains a homeostasis. The socially sanctioned hysteria of Victorian ladies, the arctic hysteria of the Eskimos, the provocative, assaultive aggressiveness of the Qolla illustrate adaptations to malnutrition as do Western society's violence and greediness. Many data are listed which underscore the child abuse connection and several more demonstrate the optimistic salutary effects of corrected nutrition with "difficult" children, prison probationers, child abusers.

Specific suggestions are made on how and where to integrate the model, in part or whole, into existing programs, and how it could be used to improve research. Where to seek information on training in Orthomolecular therapy is also indicated. A reminder is offered that the attack on child abuse would be greatly fortified with Orthomolecular nutrition and that it is remiss not to integrate the model into existing programs.

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