Ecologic-Metabolic Profile of Schizophrenia

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Scrooge's Maladaptive Food Reaction

In Charles Dickens' A Christmas Carol, Jacob Marley, Scrooge's former partner appeared to Scrooge in a ghostly apparition. "You don't believe in me," observed the ghost. "I don't," said Scrooge. "What evidence would you have of my reality beyond that of your senses?" "I don't know," said Scrooge. "Why do you doubt your senses?" "Because," said Scrooge, "a little thing affects them. A slight disorder of the stomach makes them cheat. You might be an undigested bit of beef, a blot of mustard, a crump of cheese, a fragment of undone potato. There is more of gravy than the grave about you whatever you are!" (1843).

Introduction

Immunologic reactions (allergic) and non-immunologic reactions (allergic-like) occurring to foods and various isolatable substances in foods are assuming increasing importance as causative factors in acute and chronic diseases in general and in behavioral, learning problems, emotional and mental states- in particular. Dohan (1973) observed schizophrenics to recover twice as fast if cereal grains and dairy products were removed from their diets. Wheat gluten secretly returned to the diet caused relapses in the psychosis. Singh and Kay (1976) confirmed the evidence that gluten exacerbated the schizophrenic process. Greden (1974) observed coffee and caffeine-containing substances to evoke disordered emotions. Furlong (1975) confirmed these same observations of a causal relation between caffeinism and disordered emotion. Foods have been observed to evoke metabolic errors in those predisposed to these metabolic errors. Examples are a porphyric reaction evoked by beef in a susceptible person (Eastham, 1971), specific sugar intolerances such as galactocemia from galactose-containing foods in galactose intolerant persons, lactose intolerance, fructose intolerance, specific amino acid intolerance such as phenylketonuria, which can also occur in unsuspecting adults (Perry, 1973). A more general consideration is the disordered metabolism caused by the toxic effects of diets high in free carbohydrates and high in

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fats. This food evoked disordered metabolism would have the effect of producing maladaptive metabolic reactions to numerous substances. The inflammatory consequences of generalized pancreatic suppression effect of addiction to foods and chemicals must be considered in assaying maladaptive reactions to foods, chemicals, and inhalants. The enzymatic deficiency consequences of deficiencies in specific vitamins, amino acids, and minerals need to be considered as potential causes of maladaptive reactions.

Hippocrates observed that when a food was avoided for four days, a symptom reaction may occur on re-exposure. The relationship between gastric function and physical and mental symptoms was understood in the middle ages as reflected in such terms as hypochondriasis meaning if you hurt below the rib cage you hurt all over, and melancholia meaning if you have a stomachache you are depressed. In 1621 in England, Burton observed beans as a cause of headache and cow's milk as a cause of depression. In 1898, Baker observed lethargy in children as caused by reactions to foods. The allergist, Albert Rowe (1931, 1944, 1972), starting in the 192 (vs observed numerous physical and mental symptoms as caused by foods. The common medical knowledge and practice of the value of an elimination diet stems from his observations. There have been many objective observers confirming physical and mental reactions to environmental substances through the years. Reviews of central nervous system maladaptive reaction to environmental substances can be found in such books as **Allergy of the Nervous System,** (Speer, 1970). **Annual Review of Allergy** (Randolph, 1973), and **Clinical Ecology** (Dickey, 1976).

It is common knowledge that individualized idiosyncratic reactions, both mental and physical do occur to foods, chemicals, and inhalants and the assumption is generally made that these are infrequent. The observations of clinical ecology are that these idiosyncratic reactions are frequent rather than rare and that the central nervous system frequently is involved in these reactions. When the system of ecologic-metabolic monitoring is applied to schizophrenia, there emerges evidence of (1) a cause and effect relationship between ecological factors, symptoms, and disturbed body chemistry, and (2) a substantial degree of reversibility of this illness by honoring these observed facts.

We are indebted to Theron C. Randolph, M.D., (1976), allergist, for correlating the observations of the allergy subspecialty clinical ecology with the laboratory information of Hans Selye regarding the general adaption syndrome. Chronic stresses lead to chronic disease. Frequent contact sometimes leads to addictive adaptation with the classic symptom relief on contact and later emergence of withdrawal symptoms. Many chronic physical as well as chronic mental illnesses have these symptom fluctuating characteristics of addictive adaptation. Clinical ecology gives us tools by which we can objectively observe ecologic stressors leading to disease. To this format of observing reactions to environmental substances under the starting point of an environmentally controlled non-reactive state, I have added laboratory monitoring of body chemistry of before and after the reaction occurs. This metabolic profile of what is biochemically happening during the non-reactive as well as the symptom reactive state to foods, chemicals, and inhalants gives us the evidence of objective observed cause and effect relationships between ecologic factors, body chemistry, and mental states.

No matter whether the cause is immunologic or an assortment of non-immunoiogical causes, clinical ecology provides by controlled single systematic exposure to potentially symptom incriminated substances, a useful tool in discovering cause and effect relationships between environmental substances and symptoms. Adding biochemical monitoring before and after these reactions gives us valuable objective evidence as to why these reactions are occurring and the consequences of the reactions occurring.

There emerges evidence of frequent adaptive addiction and evidence that the

chemistry of addiction and the later failure to maintain addiction is synonymous with the chemical and clinical stages of maturity onset diabetes mellitus.

The following ecologic-metabolic profiles are submitted as evidence of a cause and effect relationship between ecologic factors, biochemical abnormalities emerging in response to maladaptive reactions to ecologic substances, and the reaction of schizophrenia.

Ecologic-Metabolic Profile Case Studies

This 18 year old autistic boy has been varyingly considered as having infantile autism, mental retardation, and/or childhood schizophrenia. He was first noted to have retarded speech development at age four. Chief complaints at the time of examination at age eighteen were that there was a lag in central nervous system function such as learning to read before he learned to speak, compulsive gesturing, obsessional thinking, perseveration, mood swings from pleasurable excitement when he laughs inappropriately, negativism, irritability, avoidance of speech even when he understands, odd movements of his head and neck, fatigue, and generalized pimples especially on his face. When he speaks it is always with pressure of speech. He has been extensively studied and extensively treated both psychotherapeutically and educationally. Some degree of educational progress has been made in spite of the organic odds.

He was prepared for deliberate food testing by four days of food fasting while using non-chemically contaminated water.

ECOLOGIC-METABOLIC DIAGNOSTIC PROFILE **Primary Diagnosis 1**. Chemical Diabetes, Stress Type

Blood Sugar Results of Test Meals of Single Foods

Foods	at 1 hour, 150 at 1 !4 hrs.
Wheat Rice	175
Raisins	210
Sweet Potatoes	180
Irish Potatoes	190
Cane Sugar	220
Clover Honey	190
Dates	170
Mg.% Blood Sugar One Hour After Test Meal	
1 6 0	

2. Allergy, Unspecified

Symptoms In Response To Test Meals of Single Foods

Foods	
Wheat	laughing, and pacing, first excited, then calm.
Corn	Very energetic, pacing
Triticale	Irritable and sleepy
Corn	Speaking loudly with pressure of speech, increased energy
Milk	Talkative
Apple	Negativistic
Grape	Singing to himself
Raisin	Sleepy and irritable
Cherries	Negativistic, hyperactive, and then sleepy
Sweet Potato	Grimacing, rocking back and forth, excited, hyperactive
Tomato	Stomachache, nausea, vomiting, anxiety
Eggplant	Hyperactive
Beets	Nose itching, hyperactivity
Black Olives	Headache which lasted two hours
Cane Sugar	Restless, negativistic
Maple Syrup	Grimacing, laughing, belching, snapping his fingers, pacing, scratching his head, moving his arms frequently
Honey Dates	Yawning. He stated, "I feel miserable." Nose running, sneezing, increased self-awareness, demanding, hard to please, talkative
Brewer's Yeast	Laughing and quite exuberant
Reactions	
Sneezing,	

Secondary Diagnosis

1. Psychosis Associated with Organic Brain Syndrome Secondary to:

(1) Chemical Diabetes Stress Type

(2) Central Nervous System Allergic Reaction

Central Nervous System Reactions to Test Meals of Single Foods

Foods	
Wheat	Laughing, pacing, excited
Corn	Energetic, pacing
Triticale	Irritable, sleepy
Corn	More energetic, speaking loudly with pressure of speech
Milk	Talkative
Apple	Negativism
Grape	Singing to himself
Raisins	Sleepy, irritable
Cherries	Negativistic, hyperactive, sleepy
Sweet Potato	Grimacing, rocking back and forth, excited, hyperactive
Tomato	Anxiety
Eggplant	Hyperactive
Beet	Hyperactive
Black Olives	Headache
Cane Sugar	Restless, negativistic
Maple Syrup	Hyperactive, grimacing, laughing,-snapping fingers, pacing, scratching
Honey	Yawning, general ill feeling
Dates	Demanding, hard to please, talkative, laughing, and exuberant

(3) Dietary Nutritional Deficiency

A. Folic Acid Deficiency

FIGLU Test 6 (Normal 3 mg. for 24 hours)

B. Hair Biopsy Test Results

Substance	**Deficiency or Excess Rated as Minus or Plus from Normal Range**
Manganese	**-10**
Lithium	**-10**
Iron	**-9**
Calcium	-9
Copper	-8
Zinc	-6
Sodium	+9
Potassium	+9

(4) Bacterial Infections
Reactions

Staphylococcus Coagulase Negative Gram Positive Cocci Gram Negative Bacillus Alpha Streptococcus Interobacter	Aerogenese interobacter Agglomerans

Progenitor Cryptocides ----------Results of darkfield microscopic study of blood

Rating of two on a scale of 0 to 4. Present were cogwheels, target cells, motile rods, granular cells, degenerate cells.

Mother's Statement

Larry weighed $9^{1/2}$ pounds at birth. For the first year his development was normal except that he was very active and hard to hold. By the time he was 18 months of age, he was rarely still during the day and frequently restless and unable to sleep at night. At three years of age he resisted sitting even long enough to eat and would eat on the run. His food habits were rigid. He mainly ate toast, crackers, milk or soup. He

greatly feared choking and preferred strained fruit, vegetables and meat. After the toddler stage he never seemed to have an appetite. Our concern grew over his delayed speech. He could say a few words but rarely spoke. Sometimes he seemed deaf. Other times his hearing seemed hyperacute and he would put his hands over his ears. He communicated his wants mainly by taking an adulf s hand and leading them.

At an early age he began twirling objects such as pan lids and even garbage can lids. Between three and four years of age he began drawing the phases of the moon and traffic signs. He seemed fascinated by stop signs and would say "stop sign" over and over and could instantly recognize the hexagon shape in any design.

Shortly before he was five years of age, he was admitted to the diagnostic nursery associated with the medical school. He was started on Mellaril.. Now he could speak in short sentences, but it still seemed a painful effort. The nursery was a Montessori school and he began to read and write. He preferred to work and play alone ignoring the other children.

On several occasions, he had severe panic reactions for no apparent reason. When he was six years old he bolted out of a department store into the street obviously terrified and refused for years to go into this store.

After three years at the diagnostic nursery, we were told to place him in a public school for retarded children. He had stayed longer at the nursery than any other child and was an enigma to them. The next few years were a traumatic time for both my child and me. Fortunately after two years a church school established a special education class and Larry was one of the first admitted. He eagerly went to the new school and was taken off the tranquilizer. Soon after the change in schools, he taught himself how to write in old English script and could cut intricate letters out of a blank piece of paper. He also learned to bowl and swim.

With the onset of puberty, he grew very rapidly and began to seem exhausted much of the time. He went to school only half a day and was too tired to bowl or swim. He had increased respiratory infections, some
quite severe. He was irritable and began to have bizarre hand movements, facial grimaces and a purposeless laugh. He developed acne on his face. The fall Larry became 18 years old, he developed severe hay fever and insomnia. He seemed to feel miserable and the facial grimaces and hand movements became more pronounced.

In February, 1976, when Larry was still 18 years of age, he started on Dr. Philpotfs regime. From the third day of fasting, we began to notice a change. Larry began to sleep soundly and has continued to do so. Even before the food testing was over, he was obviously much more alert and was speaking with less effort. Since being on the rotation diet and other measures he has continued to improve remarkably. He is calm and feels well. The facial grimaces, hand movements and purposeless laugh gradually subsided over about six months of time. His skin is clear, he has had no more infections of any kind nor any hay fever. He has developed interests in many new areas and has a sense of humor. He is eager to go to school and is making steady progress academically and socially in a private school with students of normal intelligence. He particularly enjoys gymnastics at school. His increasing self confidence is evident. His growing emotional maturity is a joy to behold. The talent in art is also becoming more evident and he is thinking of becoming a professional artist.

Millicent A. Stream, M.D.

Twenty-Seven Year Old Chronic Schizophrenic Woman with Cerebral Allergic Reactions, Chemical Diabetes and Infections

This twenty-seven year old woman has been ill for a number of years. She has been on Valium for the last six years. Numerous therapeutic attempts have been made to help her. Symptoms at the time of evaluation were depression, flat affect, perceptual distortions such as feeling she is glued to a chair. She was unable to earn a

living or care for her families needs. She was virtually functionless with a schizo-affective reaction.

She was prepared for deliberate food testing by five days of food fasting while using non-chemically contaminated water.

TABLE2 -METABOLIC

ECOLOGI DIAGNOSTIC PROFILE

C **Primary Diagnosis**

1. Chemical Diabetes Mellitus, Stress Type Blood Sugar
Results of Test Meals of Single Foods

Foods	**Mg.% Blood Sugar One Hour After Test Meal**
Raisins	**180**
Raisins	**180**
Grape Juice	200
Buckwheat	180
Dates	170
Rice	170
Triticale	180
Fresh Corn	180
Potatoes	170
Sweet Potatoes	240

2. Allergy, Unspecified

Symptoms in Response to Test Meals of Single Foods

Foods	**Reactions**
Butter	Headache, withdrawn
Powdered Milk	Tension, stomachache
Cottage Cheese	Indecisive, confused
Monterey Jack Cheese	Tension, stomachache, diarrhea
American Cheese	Tired, aching muscles
Blackberries	Stomachache, runny nose, dizzy
Pineapple	Dizzy
Figs	Anxious, irritable
Prunes	Tired, chilly, depressed
Strawberries	High
Grape	Tired
Buckwheat	Fatigued
Dates	Dizzy, irritable, withdrawn
Avocado	Irritable, down
Sunflower Seeds	Dizzy, headache, anxiety
Honey	Dizzy
Mushroom	Tired
Peas	Headache, muscle tension
Lentils	Headache, tense
Garbanzos	Sleepy
Peanuts	Tired, stomachache
Oatmeal	Tired, withdrawn, hostile
Millet	Headache, hostile, irritable
Rice	Fatigued, faint, headache
Triticale	Depressed, hostile, tired
Wheat	Dizzy
Brazil Nut	Headache, worried
Filberts	Dizzy, confused
Potatoes	Runny nose, tired, headache
Broccoli	Tired, depressed
Cabbage	Headache
Winter Squash	Stomachache, diarrhea
Celery	Headache, dizzy
Sweet Potato	Dizzy
Chicken	Tired
Beef	Stomachache, anxious
Pork	Tired
Lobster	Headache, tired, depressed
Tuna	Anxious, headache, dizzy
Shrimp	Tired

Response to Cytotoxic Testing Rated+ito ++++

Substance	Reaction	Substance	Reaction
Beef	+	Cottage Cheese Beets	
Eggs	+		
Potato	+		

Secondary Diagnosis

1. Psychosis Associated with Organic Brain Syndrome Secondary to:

(1) Chemical Diabetes Mellitus

(2) Central Nervous System Allergy - Schizophrenoid Reaction with Autistic Features

Central Nervous System Responses to Food Tests of Single Foods

Foods	Reactions
Butter	Headache, withdrawn
Powdered Milk	Tension
Cottage Cheese	Indecisive, confused
Monterey Jack Qieese	Tension
American Cheese	Tired
Blackberries	Dizziness
Pineapple	Dizziness
Figs	Anxious, irritable
Prunes	Depressed, tired
Strawberries	Feeling high
Grapes	Tired
Buckwheat	Fatigue
Dates	Dizziness, irritable, withdrawn
Avocado	Irritable and feeling depressed
Sunflower Seeds	Dizzy, headache, anxiety
Honey	Dizziness
Mushrooms	Tired
Peas	Headache, muscle tension
Lentils	Headache, tension
Garbanzos	Sleepy
Peanuts	Tired
Oatmeal	Tired, withdrawn, hostile
Millet	Headache, hostile, irritable
Rice	Fatigue, faint, headache
Triticale	Depressed, hostile, tired
Wheat	Dizziness
Brazil Nut	Headache, worry
Filberts	Dizzy, confused
Potatoes	Tired, headache
Broccoli	Tired, depressed
Cabbage	Headache
Celery	Headache, dizzy
Sweet Potato	Dizzy
Chicken	Tired
Beef	Anxious
Pork	Tired
Lobster	Headache, tired, depressed
Tuna	Anxious, headache, dizzy
Shrimp	Tired

(2) Dietary Nutritional Deficiency

Hair Test Biopsy

Substance	Results	Normal Range in Mg.%	Findings
Potassium	3.2	4-20	Low
Manganese	0.04	0.005-0.17	Low
Lithium	0.004	0.005-0.02	Low
Chromium	0.10	0.04-0.07	High
Calcium	153.3	46-85	High

(3) Bacterial Infections

Streptococcus veradans	Staphylococcus Coagulase Positive
Neisseria 1	Staphylococcus Coagulase Negative
Neisseria II	Diptheriods

Progenitor Cryptocides ------Results of darkfield microscopic study of the blood.

Rating was 1 *'A* on a scale of 0 to 4. Present were cogwheels and crystals.

Chronic Undifferentiated Schizophrenic With Autistic Features and Multiple Organic Abnormalities

This fourteen year old girl weighed four pounds at birth. She never would cuddle as a baby. She was lacking in spontaneous curiosity as an infant and child. Her school progress was slow. Her speech related mostly to her wants. She played by herself. She was awkward and reclusive and the object of ridicule by her peers. At the time of her examination, she was observed to be negativistic, flat in affect, short in attention span, perceptually distorted, irritable in that usual noises and movement bothered her, obsessional, demanding that everything be just so, and carrying around objects such as magazines and pictures rather than relating to people.

She was prepared for deliberate food testing by five days of food fasting while using non-chemically contaminated water.

ECOLOGIC-METABOLIC DIAGNOSTIC PROFILE **Primary Diagnosis**

1. Acute Bronchitis

2. Chemical Diabetes Mellitus, Stress Type

Blood Sugar Response to Test Meals of Single Foods

Foods	Mg.% Blood Sugar One Hour After Test Meal
Grapes	200
Raisins	250
Dates	220
Apricots	300
Oranges	180
Apples	180
Mature Corn	260
Fresh Corn	300
Sweet Potato	200
Millet	240
Wheat	170
Great Northern Beans	170
Honey	180
Maple Sugar	220
Cane Sugar	200

3. Allergy, unspecified

Symptoms in Response to Test Meals of Single Foods

Substance	
Grapes	Tired, listless
Raisins	Tired
Dates	Cold, tired, stomachache
Apricots	Preoccupied
Strawberries	Cheerful, talkative
Apples	Tired
Milk	Tired, restless
Corn	Withdrawn, irritable
Carrots	Stomachache, chest pains
Green Beans	Daydreaming, quiet
Millet	Sleepy
Green Peas	

Response to Cytotoxic Tests. Rated + to ++++

Substance	**Reaction**	**Substance**	**Reaction**
Cold			
Wheat	++	Cashew	++ + + +
Rice	+	Almonds	
Rye	+	Cheddar Cheese	
Eggs	+	Navy Beans	
Potato	+	String Beans	
Chocolate	+	Celery	
Milk	+	Peaches	
Cottage Cheese	++	Apricots	
Swiss Cheese	++	Broccoli	+++
Mushroom	++	Cauliflower	+ +++ +
Baker's Yeast	++	Cotton Seed	+++
Brewer's Yeast	+ +	Pineapple	
	++	Yams	
		Cigarette	

Secondary Diagnosis

1. Psychosis Associated with Organic Brain Syndrome Secondary to (II Chemical Diabetes Mellitus, (2) Central Nervous System Allergy-Schizophrenoid Reaction With Autistic Features

Central Nervous System Reactions to Test Meals of Single Foods

Foods	
Raisins	Tired, listless
Dates	Tired
Apricots	Tired
Strawberries	Preoccupied
Apples	Talkative
Milk	Tired
Corn	Tired, restless
Carrots	Withdrawn, irritable
Millet	Daydreaming, quiet
Green Peas	Sleepy
Reactions	

(3) Dietary Nutritional Deficiencies

Results of Hair Tests

Substance	Results	Normal Range in Mg. %	Findings
Potassium	0.2	i-5	Low
Copper	0.8	1.1-3.1	Low
Zinc	10.4	13-20	Low
Iron	0.5	0.8-2.6	Low
Manganese	4.1	6-10.1	Low
Sodium	1	1-5	Low
Calcium	106	46-85	High
Phosphorous	22	9-15	High

(41 Bacterial Infections

Staphylococcus Coagulase Positive	Gamma Streptococcus
Staphylococcus Coagulase Negative	Streptococcus faecalis
Diptheroids	

Progenitor Cryptocides — Results of darkfield microscopic study of the blood.

The reading is *VA ona* scale of 0 to 4. Present were target cells. crystals, protoplasts, and granular cells.

2. Other Abnormal Findings

Findings		Normal	Findings 4 Mos. Later
Glucose	60	70-115	
8UN	27	8-22	11
SGOT	75	2-46	28
LDH	200	46-124 (IU/U	169 (N 100-225 mu'/mll
Uric Acid	7.2	2.0-7.0	3.8
Potassium	5.4	3.5-5.3	3.0
Calcium	11.8	8.5-10.5	9.4
MCH	32	27-31	
Segmented	83	50-65%	60
Lymphocytes	17	25-40%	35

Statement of Psychiatric Social Worker

The social history information was secured from the parents of Dee, age 14, on the first day she arrived at the clinic July 27, 1977. The parents seemed emotionally stable, intelligent, concerned, hopeless, and guilty in reference to the severe, problem they were experiencing with their daughter. They viewed the Ecology House Clinic as a last resort and at the bottom of a long list of professionals, psychiatrists, psychologists, and social workers that they had worked and consulted with for the psychiatric treatment of Dee. Also, Dee had been hospitalized for two years from age 11 to 13 in a state institution with little change in behavior.

History revealed that Dee was a normal birth weighing 4 pounds and 6 ounces. She was a first born child (she has two younger normal brothers, age 8 and 12.) The parents planned Denise and they had wanted a daughter. However, from birth they observed their daughter to be different. Dee was a cross, irritable baby and she did not like being held or cuddled. She had no spontaneous interest in her environment. She hummed constantly. She would sit for hours hitting her thumbs against a hard surface in a musical fashion. She never played with toys, however she would become obsessed with an object, such as a cereal box, and attach herself to the box. She resisted change. Dee" never related with her younger brothers or peers. Communication with her parents was only when she wanted something. Her school adjustment was reported to be extremely poor. She was tried in both the regular classes and the classes for the learning disabled. The school felt that Dee's intelligence was normal but that she just was

not performing satisfactorily. Dee's behavior just prior to her coming to the Ecology House Clinic was extremely disturbing to her parents. She would fluctuate from extreme withdrawal to extreme aggressiveness, shouting, and screaming and would become extremely paranoid with her family accusing them of wanting to harm her. The parents felt that their own family situation was deteriorating. The family was extremely anxious and worried with Dee's "crazy behavior".

Dee had no known allergies. History revealed that the mother had sinus and hay fever. The maternal grandmother died of diabetes and the paternal grandparents were somewhat withdrawn and non-sociable.

Dee finished the testing program at the Ecology House Clinic on August 26, 1977, and the parents continued to have close contact with the staff of the Ecology House Clinic. The program that was outlined for Dee was followed and at the present, Dee has made tremendous progress. She is enrolled in a regular school. Her grades have been above average. She is relating to her peer group. She is getting along extremely well with her parents and brothers and the father stated "I have myself a daughter for the first time in 14 years". Dee is on the basketball team and in the choir at her school. She now shows interest in her environment and she is presently planning to take ballet and is interested in piano. She no longer is showing any symptoms of psychosis. Her ritualized behavior has disappeared and the family is quite surprised to learn that Dee can be really fun.

Betty Bridges, M.S.W., A.C.S.W.

Discussion

The ecologic-metabolic profile applied to schizophrenia reveals dynamic interactions between several organic factors. In fact, there are common denominators with degenerative diseases thus revealing psychoses such as schizophrenia, manic-depressive reaction, autism and similar reactions as being variants of a more basic degenerative disease process. Hans Selye's (1956) formula of chronic stress leading to inflammation, which is named as diseases, is abundantly demonstrated. The diseases are named according to the tissues inflamed, the metabolic systems interfered with, the secondary invading opportunist organisms or the autoimmune responses evoked. Demonstrated as present are such factors as disordered carbohydrate metabolism, disordered lipid metabolism, addictive reactions and their counterpart of allergic (immunologic) and/or allergic-like (non-immunologic) reactions, deficiencies of essential nutrients (vitamins, minerals, amino acids), sometimes heavy metal toxicity, sometimes metabolic errors, and invariably varied maladaptive reactions to opportunist microbes and/or their toxins.

The Role of Carbohydrate Disorder

After a four to six day period of avoidance, patients were fed meals of single foods. The quantities were "Eat the amount you wish". The blood sugar was taken one hour after the meal was completed. If serious symptoms emerge before or after one hour, the blood sugar is also taken at that time. Blood sugar is taken before each meal if the blood sugar was abnormal the preceding meal. 160 mg.% is accepted as the upper limits of normal irrespective as to the amount eaten. Based on the standard amount of carbohydrate used in the glucose tolerance test, this non-specific amount of food will be logically questioned. There are four reasons to not be concerned about amounts: (1) there are hyperglycemic reactions as well as normoglycemic levels at all amounts such as little, medium, or large, (2) a retest after three months of avoidance of the hyperglycemic reactive foods will, with rare exceptions, reveal no symptoms and normal blood sugar no matter how much is eaten in a single test meal, (3) other test evidence, such as sublingual testing, RAST, intradermal serial dilution testing, and symptoms evoked during deliberate food tests reveal these hyperglycemic reactions to simply be an aspect of allergic and/or allergic-like reactions and the fact that they recover with a

period of avoidance the same as other allergic or allergic-like reactions also confirms this, (4) this is a stress test purposely provided in the life-like amount of quantities to determine what this patient's eating habits are doing to his metabolism. This true-to-life stress test is more valid, since it coincides with the patient's eating habits, than artificial stresses such as cortisone or tolbutamide tests commonly used to determine the presence of chemical diabetes. In any event, if this problem of carbohydrate disorder is assessed by the standard glucose tolerance test associated with monitoring for insulin, the results equally reveal that schizophrenics have chemical diabetes (Brambilla, 1976).

Metabolic carbohydrate interference by reactions to carbohydrates, fats, proteins, and chemicals is revealed by this ecologic-metabolic testing. This evidence of interference of carbohydrate metabolism by multiple substances and multiple classes of foods is in sharp contrast to the generally held view of intolerance to carbohydrates only as a cause of hyperglycemia. This fact reveals the necessity of avoidance and/or spacing of contacts below symptoms and/or hyperglycemic evoking levels of all foods and substances evoking these maladaptive reactions. Furthermore,, the presence of varying degrees of carbohydrate interference is demonstrated to be a common denominator to many degenerative diseases whether we name these diseases diabetes mellitus, rheumatoid arthritis, ulcerative colitis, multiple sclerosis, schizophrenia, autism, and so forth. It is observed that the chemistry of the diabetes mellitus disease process and that of addiction and its counterparts of allergic and allergic-like reactions are one and the same and include (1) acute and/or chronic metabolic acidosis, (2) disordered carbohydrate metabolism. Furthermore, IgG antibodies as well as pancreatic specific antibodies have been demonstrated to be significant in diabetes mellitus (Bottaz-zo, 1974). Since the presence of chemical diabetes mellitus is demonstrated in degenerative diseases, the presence of a pancreatic autoimmune reaction is presumably also significantly present as it is in the overt clinical stage of diabetes mellitus.

Ecologic-metabolic testing reveals hypoglycemia to sometimes be present during the adaptive addictive stage. The hypoglycemia emerges some three to four hours after the meal of addictive food revealing this to be a manifestation of the addictive withdrawal phase. After four days of avoidance of the addictive substances, then hypoglycemia occurs at one hour after the test meal exposure and the hypoglycemic phase is not present at three to four hours. Thus relative hypoglycemia evoked by food withdrawal is demonstrated to be chemical diabetes mellitus. Thus hypoglycemia as a frequent precursor to adult onset overt clinical diabetes mellitus has been again confirmed.

The Role of Disordered Lipid Metabolism

Schizophrenics have been observed with characteristically higher than normal free fatty acids in their blood (Franzen, 1972). In a group of allergic behaviorally disordered adolescents in whom about one-third had been psychotic, lipid metabolism was demonstrated to be abnormal by the method of studying phospholipid-cholesterol ratios (Fleischman, Philpott, Von Hilscheimer, Moore, Milner, Klotz, 1974; Klotz 1976). It is felt that this disordered phospholipid-cholesterol ratio reflects cell membrane instability which may cause the cell to react more sensitively to allergic insult.

I postulate two sources for this disordered lipid metabolism such as (1) high fat diet, (2) 10% lipase production by the pancreas. A 10% fat diet, rather than the usual 45% fat diet, has been observed to favorably alter the degenerative disease process (Leonard, Hofer, Pritikin, 1977). It appears logical to reduce the fat intake to 10% of total weight of diet. A logical supplementation is pancreatic lipase enzyme associated with full spectrum of pancreatic enzymes and bicarbonate. After all, the diabetic process involves as a central problem that of pancreatic insufficiency in which bicarbonate and enzyme production are even more

inhibited than insulin production (Frier, 1976).

The Role of Pancreatic Insufficiency

The diabetic disease process results from generalized pancreatic insufficiency. Bicarbonate and enzyme production are more inhibited than insulin production (Frier, 1976). The cardinal features of disordered carbohydrate metabolism, disordered fat metabolism, and disordered acid base balance result from generalized pancreatic insufficiency. It is known that alcohol and tobacco inhibit pancreatic function. My observation is that addictions to any foods or substances inhibit pancreatic function.

Low production of pancreatic proteolytic enzymes has the consequence of (1) amino acid deficiency due to lack of digestion of proteins to amino acids. (2) poorly digested and undigested proteins being absorbed into the blood through the intestinal mucous membrane and evoking inflammatory reactions in many parts of the body, (3) a rise in tissue kinin hormones which evoke inflammations. The rise in kinins occurs when chymotrypsin and carboxypeptidase are in low supply since these enzymes have a regulatory control over kinins and also over resolution of inflammations.

Low production of pancreatic bicarbonate has the consequences of (1) acute metabolic acidosis during addictive reaction and especially in withdrawal phase, (2) acute metabolic acidosis during acute allergic and allergic-like reactions, (3) a severe state of metabolic acidosis can emerge when the adaptive addiction cannot metabolically be maintained (diabetic acidosis), (4) a rise in kinin evoked inflammatory reaction since an alkaline pH has a regulatory control over kinin production.

The Role of Panendocrine Disorder

There is evidence that all endocrine glands can be influenced by reactions to foods, chemicals, and inhalants. These are usually in the nature of inhibition of function, but can also be excitation of function. Women in the involutional period characteristically lose their hot flashes and libido improves in men and women when avoiding and/or spacing symptom incriminated substances. Low thyroid function characteristically returns to normal when avoiding and/or spacing symptom incriminated substances. The impression is gained that primary endocrine disorder cannot be correctly assessed until after the removal of and/or non-symptom level spacing of symptom incriminated substances.

The Role of Nutritional Deficiencies

Amino acid deficiencies are measurably present in schizophrenia as judged by urinary amino acid spillage. Amino acids studied in the hair are less convincing of deficiency. This deficiency is understandable as a reflection of pancreatic proteolytic enzyme deficiencies. Furthermore, diet surveys in these patients reveal they usually eat a narrow group of foods and often eat high carbohydrate foods to which they are addicted in preference to protein foods. The central nervous system malfunctions when amino acids are inadequate.

Mineral deficiency is demonstrated by hair biopsy. The central nervous system cannot function properly unless essential minerals are adequate and in balance. Monitoring of vitamin C urinary spillage reveals that deficiency and absence of vitamin C is demonstrated in response to specific, individualized symptom reactive foods. It could be profitable to test for other nutrients in this same way. A model for such stress testing to discover deficiency is that of the tryptophane loading test in which Pyridoxine deficiency is indicated by the degree of spillage of urinary xanthiurinic acid. This same format of testing for porphyric reactions using the before and after test exposures method reveals porphyria to sometime emerge in response of specific symptom reactive substances. It could be profitable to test for other metabolic errors using this same stress method.

Acute reactions to foods, chemicals, inhalants, and microorganisms can often be stopped or prevented by giving intravenous vitamin C and/or intravenous B6, after or

before a test reaction. Oral administration of vitamin C, B complex vitamins and minerals ahead of test metals has also been demonstrated to be capable of materially reducing maladaptive reactions (Philpott, 1976). Rimland, Callaway and Dreyfus (1978) in a double blind cross-over study found evidence of Pyridoxine improving autistic children. Such evidence reinforces the concept that nutritional deficiencies play a role in acute maladaptive reactions. The causes of these deficiencies are multiple, such as 1) inadequate intake of foods, 2) excessive demand for nutrients made by the state of addiction, 3) excessive demand for nutrients made by the secondary invading microbes. Usually all of these factors, in varying degrees, apply to the mentally ill.

The Role of Heavy Metal Toxicity

Hair biopsy reveals an occasional evidence of toxic levels of lead, mercury, cadmium, nickel, tin or aluminum. Such toxicity interferes with central nervous system function and can in its own right produce learning problems, hyperkinesis, and psychosis. Usually when present they are secondary to individual habits such as eating largely of tuna which provides mercury, heavy use of tobacco which provides cadmium and so forth. Sometimes environmental contaminants are the source such as a source of drinking water containing one or more of these heavy metals or trace elements. It is sufficiently important and sufficiently frequent to justify this examination as part of the ecologic-metabolic profile study.

Heavy metal toxicity increases the incidence of symptomatic porphyria. Of prime importance is the discovery of the source and removal of the heavy metal contamination. These metals can be removed by megadoses of vitamin C and/or EDTA chelation. Henry Peters (1958) describes a group of porphyric schizophrenics improved by EDTA chelation.

The Role of Infections

It has become my practice to grow bacteria and fungi from each patient and make autogenous vaccines from these opportunist infectious microbes. The question has to be answered as to whether these opportunist organisms are simply incidental contaminants or true infections to which the person is symptomatically reacting. In order to answer this question, I exposed a number of patients to their own bacteria and fungi both as single microorganisms and as a multiple organism vaccine. Eight to ten or more infectious agents are common and in one patient I isolated 29 microbes. Sublingual and subcutaneous test doses of these autogenous vaccines have produced the full spread of symptoms ranging from mild anxiety, depression, to full blown psychosis of hallucinations, delusions, panic, disassociation, catatonia, and so forth. I have judged the most serious symptom producing bacteria to be staphylococcus aureus. I have especially observed obsessive-compulsiveness, paranoia, and delusions evoked by test exposures to staphylococcus aureus. Candida albicans has been observed to be the most serious fungus infection evoking a wide range of symptoms which includes psychosis and catatonia. The pleomorphic microbe, named as progenitor cryptocides by Livingston and Alexander-Jackson (1970), has been consistently isolated by darkfield microscopic study of the blood and urine cultures in schizophrenics. This microbe has been varyingly described due to its pleomorphism as a bacillus, cocci, virus, mold, yeast, or microplasma. James Papez (1952) described this pleomorphic microbe as consistently cultured from the brain of schizophrenics. He observed it to grow into a pleomorphic organism starting with viral size inclusion bodies in the neurons. He described this infection as producing a mild degree of encephalitis. The observations of Fisman (1976) also recently provided evidence of a significant degree of encephalitis in schizophrenics. There appears to be logic in the belief that the final deterioration of schizophrenia, which can finally result in a chronic irreversible state, is due to a cerebral infection of progenitor cryptocides.

Fujita and Ging (1961) described the

isolation of a brown gummy substance from the urine of schizophrenics. Chapman (1962) isolated this brown gummy substance from the urine and serum of schizophrenics as well as other chronic degenerative diseases. He described this as a product of bacterial reaction with nucleic acid which produces a reduced toxic non-usable nucleic acid. He observed the organisms as being streptococcus salivarious and streptococcus mitis. Progenitor cryptocides is known to have a streptococcal phase. Progenitor cryptocides cultures produce a brown gummy fetid odorous substance consistent with that described by Fujita and Chapman (Livingston, 1970). The studies of Chapman give evidence that schizophrenics are the most toxic from infectious microbe products of all chronic degenerative diseases.

Johnson (1976) gives a review of infectious microbes in degenerative disease processes. There are likely three mechanisms involved in symptom production by these opportunist organisms, such as (1) secondary reaction to infection following the edema produced by allergic and allergic-like reactions to foods, chemicals, and inhalants, (2) immunologic reactions to these microbes and their toxins, (3) the establishment of autoimmune reactions.

It is understandable that at least one source of symptoms in schizophrenia as well as many other chronic degenerative diseases is due to secondary invading organisms and their toxins and their sapping of the body of essential nutrients.

It is also understandable that a specific infectious agent may be responsible for encephalitis in genetically and/or malnutritionally predisposed subjects in much the same specific way that an immunologic reaction to streptococcus produces glamerulonephritis in susceptible persons. In view of Papez's and Fisman's evidence there is a likely concept of an infectious encephalitis from an opportunist micro-organism as a cause of the ultimate deterioration of the schizophrenic.

We should seriously consider the likelihood that maladaptive reactions to foods, chemicals, inhalants themselves produce local edema and toxicity which compromises the homeostatic functions of these local tissues in several ways, such as lowered oxygen tension, reduced nutrition, cellular injury itself, all of which encourage locally present usually dormant or latent opportunist microorganisms to have the opportunity to flourish, at least locally, and if the reaction is severe and sufficiently pervasive to become systemically active. It is likely true there are no tissues including the brain that are free of an assortment of latent opportunist microbes.

In treating this pool of latent potentially disease producing microbes, the following should be considered:

1. The use of autogenous vaccines com posed of:

(a) bodies of the microbes and/or

(b) toxins isolatable from body fluids (blood and urine), especially since some of these are likely viral and cannot be cultured and also toxins are valuable vaccines for any microbes whether virus, fungus or bacteria.

2. Establishment of optimum local and systemic cellular function by avoidance, spacing of contact below symptom levels, neutralizing doses or treatment by optimum dose for hyposensitization of symptom incriminated substances.
3. Optimum nutrition, especially ascorbic acid needed to support adrenal cortical function during the stress of vaccination as well as its immediate anti-viral value and support of optimum white blood cell function (Delafuente and Panush, 1978) and pyrodoxine, panthothenic acid and amino acids needed for adequate function of the immunological system (Axelrod, 1973) without which the ad ministration of vaccines can be useless and even harmful.

The Role of Immunologic Reactions

When testing schizophrenics for the single factor of antibodies to wheat gleadin, Dohan (1972) demonstrated the presence of a 20.3% antibodies as compared to 3.1% in controls. However, non-psychiatric hospitalized patients had a 13.1% antibodies to gleadin and therefore their reaction to gleadin is not specific for schizophrenia, but

also specific to chronic degenerative diseases. The excess of a six time incidence of schizophrenics over controls of an immunologic reaction to gleadin is certainly significant. It has been assumed that the majority of reactions to foods are non-immunologic in origin, but rather due to enzyme deficiencies especially pancreatic proteolytic enzyme deficiencies. The inflammations thus evoked would be kinin hormone mediated. Kinins can evoke inflammation with or without the presence of antibodies (Bell, 1975). There are a number of other body substances which when in excess can make inflammations.

However, there is evidence that schizophrenics are immunologically different than non-schizophrenic controls. Amkraut, Solomon, Allansmith, McClellan, and Rappaport (1973) observed schizophrenics to have significantly higher IgG, IgA and IgM immunoglobulins than 315 normal controls. In view of the evidence of a chemical diabetes mellitus state in schizophrenia, it is significant to examine the known immunology of diabetes. IgG class autopancreatic islet cell antibodies have been observed in a small sampling of diabetics (Bottazzo, 1976). MacCuish (1974) also found antibodies to pancreatic islet cells in diabetes. Hirata (1974) found autoimmune antibodies to insulin in a small sampling of spontaneous hypoglycemics.

Furthermore, Rea (1978) demonstrated the emergence of the following abnormalities during symptom reactions to specific foods or chemicals:

1. Complement3 was abnormally low in 9 of 12 patients.
2. Complement 4 was elevated in 4 of 12 patients.
3. C-reactive protein was positive in 7 of 8 patients.
4. T cell decrease in 7 of 7 patients. These were not reported as being schizophrenics, however, varying symptoms refinable to the central nervous system occurred in 8 of the 12 patients tested.

It could logically be reasoned that this assortment of specific isolatable substances such as foods, chemicals, inhalants evoking hypocomplementemia reflects in an indirect way the demands being made by an as yet unknown immunological reaction which further improvement in our technology will in the future isolate. This evidence of evoked physical and mental symptoms associated with evoked hypocomplementemia to foods causes us to not lightly dismiss the probability of an immunological mechanism in these reactions and to consider that there are yet unknown immunological factors functioning in these cases beyond that of the currently known immunoglobulins. An alternative to an immunologic reaction occuring in an evoked hypocomplementemia is that of the activation of the non-immunologic alternative complement pathway not measurable by immunoglobulins which is, however, measurable by evoked hypocomplementemia and therefore represents an alternative complement pathway reaction (Bellanti, 1978). This would place the disease of mental and physical reactions evoked by reactions to foods and chemicals among those several known diseases characterized by decreased serum levels of C3. My clinical observations suggest that in this case this non-immunological alternate complement pathway of reaction to specific substances either represents or is materially influenced by deficiencies in essential nutrients especially ascorbate and pyridoxine. My reason for making this consideration is the demonstratable value of intravenous doses of ascorbate in the range of 10 gm and pyridoxine in the range of 1000 mg. in stopping reactions that have occurred or by preventing reactions or materially reducing the reactions by administration of these nutrients ahead of exposure to specific substances. Another reinforcing evidence of the involvement of ascorbate deficiency is my observation that frequently the urine has normal ascorbate before a food test and none three hours after a symptom reaction to a food. Although ascorbate and pyridoxine can separately favorably influence these reactions, more is achieved if they are combined. This chemical evidence of improvement by specific nutrients in balanced combinations suggests a likely profitable research project correlating specific substance evoked hypocom-

plementemia with varying levels of demonstratable nutritional deficiency and varying levels of nutritional support with combinations of specific nutrients.

This observable decrease of C-3 in response to reactions to specific substances can explain the observed increase in infections (Bellanti, 1978). This increased infectious potential again correlates with the observation that in the diabetic disease process infections cannot be adequately defended against. This has considerable significance when the observations are made that the accumulative consequences of reactions to foods and chemicals is the development of the diabetic disease process.

This correlates well with evidence that diabetes mellitus complications such as cataracts are favorably influenced by a supplement of ascorbate (Stone, 1972) and diabetic neuropathies are favorably influenced by a supplement of pyridoxine (Ellis, 1973) and that pancreatic enzyme production (including proteolytic enzymes) is substantially reduced in diabetes mellitus (Frier, 1976).

At a higher level of biological integration than nutritional support is my observation of proteolytic enzymes such as heprin, pancreatic chymotripsin and carboxypeptidase inhibiting these food and chemical evoked reactions by the likely mechanism of exerting control of, resolution of and/or inhibition of.kinin evoked inflammatory reactions (Bell, 1975). We should always bear in mind that nutrients are simply precursors to enzymes, hormones, immunoglobulins and many other essential biological substances and units.

Immune factors, such as high IgG, IgA, and IgM, have already been demonstrated in schizophrenia. We bear in mind that autoimmune factors may yet be consistently demonstrated in autism and schizophrenia. The possible role of the pancreas needs to be considered in these autoimmune reactions. Factors deciding why the brain is an allergic shock organ in schizophrenia, may be such as (1) autoimmune reactions, (2) other immunological reactions, (3) nutritional deficiency, (4) cerebral infections, (5) other as yet unknown factors some of which may be genetic in origin.

On the other hand, the observed immunologic abnormalities in mental illnesses may be only secondary factors to a more fundamental disorder resulting from the state of addiction and its resulting enzyme deficiency state. The present state of our technology and observations would favor this formula. Genetic studies strongly suggest that there are genetic predispositions to develop addictions to specific substances in the environment. It will require an extensive statistical monitored profile study of all immunologic, enzymatic and nutritional factors occurring before and after exposure to symptom incriminated substances to reveal the relative importance of each factor.

Traditionally, when symptoms are evoked by inflammatory reactions occurring in body tissues other than the central nervous system, immunologic as well as non-immunologic factors are sometimes considered in the differential diagnosis of causative possibilities. However, when inflammatory reactions affect the brain evoking tension, fear, anger, hallucinations, delusions, depression, behavioral disorders or other common psychiatric symptoms, the possibility of immunologic or non-immunologic inflammatory reactions is virtually never considered in the differential diagnosis. This occurs because medical education to date has taught the psychiatrist to consider life experiences, interpersonal relationships, instinctual drives and so forth and virtually ignore organic inflammatory factors as causes of disordered emotion. All too often the brain and its function is treated as though it is in a separate realm from the physical function of the body; as though thoughts and feelings could exist on some extraphysical, spiritual, metaphysical plane beyond the chemical functions of the physical body. Fortunately for psychiatry, the fact that tranquilizers and antidepressants have value which can be explained in terms of central nervous system chemical function has helped to bring psychiatry down to earth in considering central nervous system chemistry. The calamity of side effects of tranquilizers is now teaching psychiatry the lesson that nutrients in foods such as choline or megadoses of

pyridoxine (DeVeaugh-Geiss and Manion, 1978) can help relieve these symptoms. Thus, psychiatrists are entering the house of nutrition through the back door. However, hopefully this developing knowledge of value in nutrients in relieving organic symptoms will lead to the treatment of mental illnesses themselves with appropriate nutrients as well as avoidance and spacing of contact with symptom incriminated substances.

The Role of Adaptive Addiction as an Artificial Drive

Nils Bejerot (1972) observes addiction as evoking an artificially induced drive. This is in keeping with my observations that the central nervous system energy made available by the irritation of the addictive withdrawal state can evoke disordered function of such drives as aggression, sexual, hunger and so forth. An even clearer picture of cause and effect relationship emerges when there is an avoidance period of four to six days during which time the adaptive-addiction is metabolically restituted and in its place emerges acute reactions on test exposures. All possible hues of disordered instinctual drives have been observed as occurring in response to these provocative test exposures. It should be understood that the maladaptive reaction of the instinctual drive may be an inappropriate inhibition of the drive or on the other hand, an inappropriate excitation of the drive. Thus, we have lethargy on the one hand and hyperkinesis on the other, catatonic immobility or catatonic excitement and agitation; inappropriate crying or inappropriate laughing; depression on the one hand or mania on the other; and so forth. It simply should be understood that characteristically allergic and/or allergic-like reactions are either an over response or an under response. The over responses create more social problems and are usually recognized more, however, the under responses are of equal importance and from this comes many emotional reactions which render the person nonproductive in learning, work or social situations. It is of interest to note that the first published article on foods adversely influencing children was that of Baker (1898) in which he observed foods evoking lethargy in children.

Responses can be the result of direct stimulation of the central nervous system producing such as weakness, dizziness, pain, disorientation, etc., while many are the result of central nervous system stimulation facilitating learned responses with the content of these responses coming from life experiences.

There is symptomatic evidence that acetylcholine rises in addictive withdrawal as well as in allergic reactions of the central nervous system. When central nervous system acetylcholine non-specifically (unrelated to stimuli) rises, highly learned responses (usually social responses) are blocked and weakly learned responses (opposed to usual social responses) are facilitated. Thus the person they love when not allergically reacting, they hate when allergically reacting or the same is true during the addictive withdrawal state. This sequence of events is suggested by injecting animals with acetylcholine in which highly learned and recently learned responses are blocked and weakly learned and deconditioned responses are activated (Carlton 1969, Hearst 1959). In any event, an evoked imbalance between neurotransmitters is apparently the basis of most of the ecologic stimuli evoked maladaptive reactions of the central nervous system.

Among the several stresses that can disorganize by overloading the functioning of the central nervous system, allergic and allergic-like reactions give evidence of being the most frequent. Under the facilitating allergic and allergic-like conditions even usual intensity or subliminal intensity stimuli will precipitate an overload response the same as if it were an overwhelmingly strong stimulus. Even though the content frequently comes from life experiences, the response is not evoked by the intensity of these learned responses or by the intensity of the stimuli being received but rather by the central nervous system arousal and irritation produced by the maladaptive responses to foods and chemicals.

Ecologic-Metabolic-Behavior Treatment Format

Treatment of any one factor influencing the production of schizophrenia conceivably will measurably favorably influence the outcome of the disease process. Optimum treatment value is achieved by simultaneously rationally treating all the organic factors demonstrated on the differential diagnosis of each person. To this must also be added the psychotherapeutic values of corrective behavioral modification, problem solving, resolution of conflict, learning of social skills, and maturity of personality.

Current Perspective in Clinical Ecology-Metabology

In spite of the numerous observations over the years of mental and physical reactions to foods, chemicals, inhalants, microorganisms, and the symptom consequences of nutritional deficiencies, heavy metal toxicity, and the biological consequences of addiction, it is not currently popular to seriously consider these factors in the differential diagnosis of schizophrenia. In fact, these same factors are also usually only slightly considered in chronic physical degenerative diseases. Time will tell us where medicine will finally place the ecologic-metabolic diagnosis and treatment of mental illness. Those physicians and patients experienced in current traditional psychiatric diagnosis and treatment are gratified by the increased chances of decreasing symptoms by the ecologic-metabolic diagnosis and treatment methods. It is not a miracle cure, but rather an abundant health life styling which of necessity must become a central way of life if the person is to be symptom free or relatively so. It contains the ingredients of stopping the progression of, and to some degree, even reversing the physical and mental chronic degenerative diseases. The present evidences of values beg for long term, intense and necessarily expensive scientific evaluation of clinical ecologic-metabology as applied to chronic degenerative diseases in general and psychosis in particular.

The most likely profitable format for discovering the sources of acute and chronic degenerative disease, whether physical or mental, is to examine broadly the body chemistry and function in the base line of a symptom reduced or symptom free state occurring after a for to six day period of avoidance of symptom incriminated substances which is compared with the abnormal chemical shifts and disordered functions occurring in the symptom evoked state occurring during induction testing of single substance exposures. The patient serves as his own control just as he does during a glucose tolerance test which can serve as a model. Thus, without double blind studies on 100 cases we have believable evidence of a cause and effect relationship between stimulus and response. This basic monitored provocative test system has been recommended and profitably applied by others (Maletsky, 1978, Potts, 1977).

Some critics have lightly dismissed observations about reactions to foods as evoking mental reactions as being the product of suggestable patients in combination with over enthusiastic non-objective doctors. It is my conclusion that there are to date enough objective correlative evidences of a causal relationship between reactions to foods and evoking of mental states in some patients to give the positivistic optimistic doctor a functional clinical framework. There are as yet enough unanswered questions about the why of these reactions to cause the negativistic, pessimistic doctor to have a reserved judgment until exhaustive, expensive more definitive evidences are discovered which offset his personality set for negativism. Furthermore, characteristic of the history of medicine that is negativistic, pessimistic doubters continue to doubt in-spite of evidence and beliefs and, therefore, practical clinical application to a considerable degree is reserved for the next generation of doctors.

Conclusion

Ecologic-metabolic monitoring of schizophrenia reveals this illness to have common denominators with degenerative diseases. Indeed, it is demonstrated to be a

variant of a central degenerative disease process. Hans Selye taught us that stress, either physical or psychological, fatigues vital metabolic processes. Inflammation is the lesion resulting from this stress produced metabolic failure. Diseases are given names according to the inflamed tissues, metabolic disorders evoked or secondary invading opportunist microbes. In the case of mental, behavioral and learning disorders, the brain is the central organ involved in inflammation, disordered metabolic function and opportunist invading microbes. Invariably an ecologic-metabolic differential diagnosis gives abundant evidence that the disease process in schizophrenia is percentage wise more physical than mental. The most effective treatment treats adequately first of all the basic demonstrable degenerative disease process. This basic treatment corrects many of the symptoms and reduces the driving force of the symptoms. Therapeutic procedures must then proceed to train out the residuals of maladaptive learned responses, lack of personality maturity, and lack of social skills which have resulted from the illness.

There are three views that should be considered in the differential causes of symptoms: (1) symptoms as an expression of nutritional deficiencies or excesses, or heavy metal toxicity, (2) symptoms as an expression of a reaction to environmental substances such as foods, chemicals, inhalants, and microorganisms and their toxins, (3) symptoms as learned responses from life experiences. The most satisfactory treatment format is developed when the examination gives answers for all of these factors. Orthomolecular medicine originally was established to determine and treat the symptoms in terms of deficiency and toxicity. Ecologic medicine was established as giving evidences of symptoms as reactions no matter why the reaction may occur. Avoidance of symptom incriminated substances gives more immediate clinical value than giving a nutrient or removing a toxic heavy metal. The detection of and treatment of both ecologic and metabolic factors gives increased values beyond either ecologic or Orthomolecular measures alone. In fact, frequently, satisfactory clinical value cannot be achieved unless these two systems are combined. Because of this fact, Orthomolecular psychiatry is now rapidly developing in the direction of ecologic-orthomolecular diagnosis and treatment. The optimum successful treatment involves a simultaneous combination of (1) an initial three months avoidance of symptoms and hyperglycemia incriminated substances, (2) a four day rotation of foods with the reinstatement of incriminated foods in three months if they still are not symptom or hyperglycemia producing, (3) specific appropriate treatment for laboratory demonstrated deficiencies in such as ascorbate, B-1, B3, B6, B-12 folic acid, amino acids, magnesium, manganese, zinc, and so forth as well as for toxic levels of such as lead, mercury, cadmium, nickel, and so forth, and (4) general supportive nutrition sufficient to have anti-stress value, (5) supportive pancreatic exocrine function in those demonstrated not to completely reinstate function after a period of avoidance and spacing of symptom and pancreatic suppressive incriminating substances, (6) daily vigorous exercise (Cooper, 1969; Kostrubala, 1976), (7) a basic anti-stress and anti-inflammatory diet preferably involving 10% fat, 70-80% complex carbohydrates, with low and infrequent use of free carbohydrates (Leonard Hofer, Pritikin, 1977), 10-15% protein with part of this being supplemental free amino acids, and (8) psychological treatment of training down phobias, training out obsessions and compulsions, problem solving, learning of social skills and personality maturity.

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Ecologic-Metabolic Profile for Physical Degenerative Diseases

William H. Philpott, M.D. [1]

Introduction

The following orientation is for those who wish to interpret the ecologic-metabolic profile in terms of physical rather than mental disease. The presentation "The Ecologic-Metabolic Profile of Schizophrenia" addresses the subject of ecologic and metabolic causes and treatment of the major mental illness, schizophrenia. However, schizophrenia is revealed to be the brain expression of a basic physical disease process. Therefore, the principles outlined in this presentation on schizophrenia apply equally to a wide assortment of physical chronic degenerative diseases as well as learning and behavioral disorders.

Common Disease Process Denominators of Chronic Degenerative Diseases

The diseases are named according to the specific tissues or metabolic systems involved in the inflammatory reactions. Ecologic, nutritional and infectious factors are common denominators in the chronic degenerative disease process whether these are identified as physical, mental or a combination of these. Factors that help decide the specific body tissues or metabolic systems that will maladaptively respond to foods, chemicals, or inhalants are such as: (1) genetic predisposition, (2) prior injury to specific tissues, (3) specific nutritional deficiencies, (4) specific infections.

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Acute Reactions as the Miniature of Chronic Degenerative Diseases

The acute maladaptive reactions occurring during deliberate symptom induction test exposures reveal in each response the building blocks of chronic physical or mental illnesses. An acute reaction of a painful joint when chronic is named as arthritis. An acute painful muscle reaction when chronic is named as myositis. An acute diarrhea reaction when chronic is named as ulcerative colitis. An acute weakness or specific paralysis reaction when chronic and sufficiently injurious to the central nervous system myelin is named as multiple sclerosis. An acute insatiable appetite reaction when chronic is named as obesity. An acute suppression of appetite reaction when chronic is named as anorexia nervosa. An acute reaction of interference of purine metabolism when chronic is named as gout. An acute hyperglycemic reaction when chronic is named as adult onset diabetes mellitus. An acute reaction of disordered

attention when chronic is named as a learning disorder. An acute reaction of anxiety when chronic is named as an anxiety neurosis. An acute reaction of tension when chronic is named as hyperkinesis. An acute reaction of involuntary imagery or perceptual distortion or thought disorder when chronic is named as schizophrenia.

Ecologic-Metabolic Factors in Autoimmune Diseases

Several multiple sclerotic cases have been observed to improve on a fast and have major classic symptoms of multiple sclerosis emerge in response to test exposures to specific substances. Material improvement occurs with ecologic-metabolic treatment. Systemic lupus erythematosus has also been observed as lessened by a fast and evoked by specific test exposures to environmental substances including foods. An example is a SLE patient with a butterfly reaction which reduced in size and color on a fast and became bright red and raised after a test meal of wheat. Such evidences lead to the conclusion that autoimmune diseases should have the benefit of an ecologic-metabolic diagnosis and treatment. The history of the development of autoimmune diseases are likely on this order. An initial reactivity to environmental substances with a superimposed infection of opportunist microorganisms, especially viruses, following which the immunologic system builds a defense against this microorganism and attacks the cells in which the microorganisms are harbored.

Ecologic-Metabolic Factors in Genetically Determined Metabolic Error Diseases

The avoidance of frequent and large doses of specific amino acids or specific sugars can materially benefit those with genetic metabolic errors in metabolizing these substances. Examples are such as phenylalanine intolerance (phenylketonuria), galactose intolerance (galactocemia), lactose intolerance, fructose intolerance, gluten intolerance (glutenenter-opathy). Glutenenteropathy (celiac disease) is profitably managed by avoidance and spacing of contact with gluten containing cereal grains.

Huntington's chorea is a classic example of a genetically determined degenerative disease. A case was diagnosed and treated by the ecologic-metabolic profile which had a progressive onset for two years with the mother and brother having already died of the disease. The results were as follows: (1) On a four-day fast, the chorea symptoms reduced by about 50%; (2) Chorea symptoms increased in response to specific test foods; (3) Chorea continued to subside after being placed on a four-day rotation diet with an initial avoidance of three months of symptom incriminative substances plus supernutrition. At six months the only residual was an awkwardness and slight and brief chorea when initiating movements.

The evidences of improvement of genetically determined diseases by ecologic-metabolic diagnosis and treatment indicates the value of such diagnosis and treatment in a wide assortment of such diseases. To my knowledge, muscular dystrophy and genetically determined demyelination have not yet been tested or treated in this way. I tested and treated a brother and sister with demyelinating disease which had been diagnosed as lateral sclerosis. Test doses of specific foods, chemicals, and bacterial vaccines increased their symptoms. Chemical diabetes was present in both cases and I assumed the demyelination was secondary to this early diabetes mellitus state and assumed a logical diagnosis to be that of pseudotabes of diabetes. The genetic predisposition to develop diabetes mellitus would still place this in a genetically determined disease.

Major mental illnesses such as schizophrenia, manic-depressive illness and autism are likely genetically determined reactions to specific environmental substances. Genetic studies implicate the genetic predisposition and ecologic studies implicate the multiplicity of reactions to environmental substances. These and similar mental diseases will likely yet be placed among the genetically determined metabolic error diseases.

Ecologic-Metabolic Factors in Malignancy

The existence of generalized specific carcinogenic substances and specific carcinogenic microorganisms is universally accepted as fact. Neglected has been the carcinogenicity of specific individualized maladaptive reactions to foods, chemicals, and inhalants. It is interesting to note that some years ago ecologists were recording idiosyncratic maladaptive reactions to specific chemical substances contacted in industry which a few years later have now been determined as carcinogenic. In this case, it is simply true that a large enough number of people reacted to the substance to have it classified as a carcinogenic substance. On the other hand, individual reactions to wheat, milk, corn or potatoes may be carcinogenic for a specific individual but not universally carcinogenic. If such a specific individualized reaction is sufficiently severe as to injure the lysosome membrane and release the lysosome granules or encourage the flourishing of an opportunist carcinogenic microorganism then malignancy can result. In a small way, recognition has been given to ecologic factors in neoplastic disease when the patient is instructed to stop smoking after the development of cancer of the larynx or the lungs which appeared to have a relationship to their use of tobacco.

The development of neoplasm is likely on the order of an individualized carcinogenic degree of reactivity to foods, chemicals or inhalants and/or a reaction to a known carcinogen either of which is associated with the reactive consequences of nutritional deficiency made by demand of the reaction and the invasion of the unhealthy reacting tissues by carcinogenic microorganisms. The rational treatment is ecologic-metabolic plus the specific treatment of the involved tissues by such as surgery, radiation, chemotherapy, hyperthermia and immunotherapy.

Summary

Chronic stress, whether physical or mental, leads to fatiguing of metabolic processes with the consequences of the production of inflammation. Man's greatest stressors are addictions and their counterparts of allergic and allergic-like reactions. Diseases are named according to the tissues inflamed or the disorder involving these tissues, the metabolic systems disorder, the secondary invading microorganisms or the auto-immune reactions evoked. Acute reactions evoked by test exposures are the miniature of chronic diseases. Monitoring the chemistry before and after these test reactions reveals the disordered chemistry of these reactions to be the same as the chronic diseases. Genetic predisposition sometimes decides the substances maladaptively reacted to and also limits the degree of stress before a reaction begins. The ecologic-metabolic profile applies equally to chronic physical and chronic mental illnesses. The most profitable starting point for diagnosis and treatment is to discover the ecologic, nutritional and infectious factors of the basic disease process. Treatment begins with treating these common disease process factors first and then proceeding to the individualized treatment based on the demonstrated individual differences of specific tissue involvement such as physical therapy for injured muscles or joints, nutritional therapy for specific demonstrated nutritional deficiencies, or behavioral corrective training for disordered emotion and so forth. It has been profitable for medical science to sharply define the differences in diseases and it is now demonstrated that it is equally profitable to diagnose and treat those common denominators of the chronic degenerative disease process of both physical and mental diseases. Sometimes medical science has failed to offer optimum treatment for degenerative diseases simply because it has discovered the genetic nature of these diseases and failed to discover that this was simply a genetic predisposition to react to isolatable environmental substances and that a measurable degree of successful treatment could be achieved by avoiding and spacing the contacts with these genetically determined symptom incriminative substances. Furthermore, this ecologic-metabolic diagnosis process demonstrates that acute reactive states are indeed the

miniature of chronic disease states. Thus this examination provides the ability to diagnose the disease process in its infancy before it has.arrived at the chronic stage diagnosed as the disease. Thus is provided the ability to apply corrective measures in reversing the degenerative disease process as well as providing the best known methods of stopping and to some degree reversing the degenerative disease once established as a specific disease entity.

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