

Children with Learning and Behavioral Disorders

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When children who exhibit learning and/or behavioral disorders are examined by a number of specialists, the diagnosis is more closely related to the orientation of the specialist than it is to the essential problems facing the child. Children who have seen up to eight different specialists have been given eight different diagnoses ranging from dyslexia to autism. Why should this be?

I believe that this means that none of the diagnostic terms have any meaning. They do not indicate the etiology, do not suggest any specific treatment, and have no prognostic value. As far as I can tell the 100 or so different names (labels) given these children all indicate one major problem—a biochemical dysfunction of the brain. But as the brain is infinitely complex in its function, there are a large number of different types of dysfunction.

There are four aspects of brain function:

(a) Perception—the ability of the senses to yield accurate information to the brain. The most common changes or abnormalities are illusions. Dyslexia is one example of a child whose main area of difficulty is visual. There may also be hallucinations. Often night terrors are

merely frightening dreams which do not vanish promptly on awakening as they do with normal people. Like some visual after-images, they linger too long. The perceptual difficulty is usually in the relationship of sense organ to the brain and most often the peripheral sense organs are normal.

(b) Thinking—this may be described by considering the process of thinking, or by considering the thought content. Both may be disturbed. Delusions are examples of a content disorder.

(c) Mood—mood may be appropriate or inappropriate, depressed or manic, continuous or cyclical.

(d) Behavior—which may be hyper- or hypoactive, or appropriate and inappropriate.

A description of these four aspects of brain function will clearly outline the degree of brain dysfunction. Usually there are changes in several of these areas, but rarely only one category of change is found. Thus most hyperactive children also have visual illusions, and consequently have reading problems, may have difficulty in concentrating and learning, and may be extremely irritable. The diagnosis will thus be determined by the orientation of the diagnostician and skill in eliciting symptoms and signs in these four areas. A diagnostician primarily interested in dyslexia may ignore

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the other areas and diagnose mostly dyslexia. Another interested only in thinking may ignore perception and behavior, while a behavioral therapist may see only wrong behavior, to be corrected by operant conditioning.

I have examined and treated over 400 children under the age of 14 since 1967. Very few have had changes in one area only. I have therefore concluded that it is meaningless to try and pin on them any of the 100 or so different diagnostic terms which have been suggested in the literature. They are all victims of a brain disorder.

Every human lives in two environments, (a) the psychosocial which includes all these relationships and experiences which mold and program us during our lives, (b) the biophysical environment which includes food, air, heat, radiation, and all the chemicals to which we are exposed. Both are equally important, but unfortunately most of the attention of our professional people has been in the psychosocial area. Fortunately more and more attention is being given to the second type of environment. A child may be ill because of a defect in his psychosocial environment, or because of the biophysical environment, or both may be in error. To tinker with the psychosocial environment (special education and so on) when the biophysical environment is wrong is of little value. It is possible to persuade a schizophrenic to behave better, but all that results is a better-behaved schizophrenic. It is equally futile to tinker with the biophysical environment if the error is in the psychosocial environment. My experience leads me to conclude that in the vast majority of cases the error resides in the physical environment and usually in the nutrition and chemical airborne environment. I will therefore ignore in this discussion the psychosocial environment, but it should not be ignored when dealing with these children.

The usual logical path in medicine is from

diagnosis to treatment. With these children it seems to be more logical to proceed from treatment to diagnosis. The newer treatments which have proven to be efficacious may be broadly divided into two main groups, (a) the deficiencies or relative deficiencies, (b) the excesses or relative excesses.

Nutritional Deficiencies

On the basis of clinical experience as well as the animal researches by Prof. Roger Williams and his colleagues, it has become evident that there is a tremendous variation in requirement for nutrients, especially the vitamins and minerals. If one draws the usual bell-shaped frequency distribution for each nutrient one will find 5 to 10 percent of the population whose optimum nutrient requirements lie outside the curve. When a person's average (under the curve) requirements are not met by food, a deficiency will arise. If, however, the requirement is outside the norm, then even a good diet will not suffice, resulting in a similar deficiency. Since the error is in the individual, this condition is termed a dependency. Theoretically there must be a number of people dependent upon every essential nutrient.

The vitamins which seem to be implicated most frequently are vitamin B3 and vitamin B6. When these vitamins are given in optimum doses, which may be several grams per day, these children recover and all the areas of brain dysfunction vanish: The dyslexias disappear, the paranoid ideas leave, the hyperactivity is gone, and one finds a normal youngster. In most cases no psychosocial tinkering is necessary. One boy who was last in his class of 20 in the fall was placed on these two vitamins and the following spring was first in the same class.

There is a rapidly growing literature detailing vitamin treatment for these children and the results. It is likely other vitamins may be necessary for some children. This work was foreshadowed about 40 years ago when one of the famous pellagrologists (an expert in pellagra) described about 70 children

with subclinical pellagra. His brief description can still be used as a model. The children all became normal when they were given vitamin B3. Hyperactivity in animals was produced by placing them on diets adequate in calories, but lacking vitamin B. They became as hyperactive as did similar rats placed on a diet deficient in calories. Apparently it is an evolutionary device for an animal made restless by hunger is more apt to find food. However the vitamin B-deficient animals were not hungry, merely vitamin B deficient. Is this why these children become so hyperactive until they are treated with vitamin B3 or B6?

There are undoubtedly mineral deficiencies involved as well, perhaps zinc, manganese, chromium, calcium, and so on. These will have to be examined.

Nutritional Excesses

(a) Sucrose and other sugars such as syrups, too much honey.

Orthomolecular physicians have found that these food additives are very toxic for many children. As well as causing a variety of somatic problems they also are responsible for many forms of learning and behavioral disorders. These substances, aptly termed empty calories or junk, are toxic for at least three reasons, (1) they are ingested in large quantities and seriously imbalance the digestive apparatus including the pancreas, (2) they displace nutritious food much as counterfeit currency drives out good currency, (3) many children are allergic to them. Eliminating all foods which have been adulterated with sucrose has another major benefit. Usually sucrose (or glucose) adulterated foods also contain large quantities of synthetic additives which color, stabilize, and impart other flavors to food. It has been

shown that many children are allergic to these additives. Elimination of these foods also eliminates these unnecessary additives.

(b) Foods to which the person is allergic.

There has been a growing awareness of the fact that allergies to common foods will produce serious brain disorders. These include milk, cereal grains, meats, in fact any food which is commonly consumed. When these foods are recognized and removed from the biophysical environment, it is followed by an amazing improvement in the child's behavior and learning ability. The term cerebral allergy or brain allergy has been used.

There is no reason why the brain should not react to foods it is allergic to since every other organ in the body can be affected. Many allergists resent the use of the term brain allergy, but they take a very narrow view of allergies, one which does not coincide with the facts.

(c) Mineral excesses.

These include minerals such as copper, lead, perhaps all the heavy metals as well as they are strong oxidizers.

Treatment

The use of these concepts for treating these children is the main aim of Orthomolecular medicine. Main attention is given to good nutrition (junk free) with special attention to food allergies. This is supplemented with vitamins and minerals already known to be very important. More will be found. Synthetic drugs not normally found in the body may be used for short periods of time, but only a small proportion of children require them. They include amphetamines, Ritalin, antidepressants, and tranquilizers. We prefer not to rely much on these drugs because they are palliative only, extremely toxic, and inhibit learning.