Intellectual Improvement of A Retarded Patient Treated with the "U" Series

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Foreword by Dr. A. Hoffer *In 1975 the* **Journal of Orthomolecular Psychiatry** *carried a report by Dr. Henry Turkel describing his use of a "U" series of nutrients for the treatment of Down's syndrome.*

Recently I asked Dr. Turkel to let us publish an additional account to bring us up to date with respect to some of the results he had been getting. I am therefore pleased to use this present paper which he has sent along. In addition he sent along a lot of supporting evidence for the claims that are made therein. I have had a chance to go over this supporting evidence and was particularly interested in the results of the I.Q. testing.

The I.Q. test in May 1968 was 44. The psychologist at that time reported that if she had cooperated her test score might have been a few points higher. The second test August 12, 1969 was full scale score of 72. This was indeed quite surprising to the psychologist who began to try to find all sorts of reasons to account for this but would not accept to the slightest degree that this might have been due to the treatment given to this patient. The psychologist listed the following four reasons: 1. all retarded subjects tend to grow intellectually; this of course is not true and I was surprised to see this kind of reasoning used, 2. the psychologist maintained that perhaps it was the mother's attention to her child which was responsible, although I do not see where there should suddenly be such an advance in mother's attention when she had been dealing with her child already for many years. The third reason given by the psychologist was inherent variability in I.Q. tests so that there was in fact no significant difference between an I. Q. test of 44 and an I. Q. test of 72 done just about a year later. It is easy, of course, to understand this psychologist's incredulity because apparently this had not ever been seen before by this psychologist. A final test in June 1971 showed a full scale score of 85. This time the psychologist reported, "The 40 point gain in I.Q. over a four year period is extremely significant."

Introduction

The "U" Series, an Orthomolecular treatment principally used to ameliorate Down's syndrome, both in the United States (Turkel, 1975) and Japan (Kurita, 1977), has recently been accepted as an alternative therapy for

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ADULT DOSAGE OF THE "U" SERIES PER CAPSULE OR TABLET

UMORPHOID-A&B	**BREAKFAST**
Thyroglobulin	
L. Triiodothyronine	66 mg.
Organic Iodide	25 meg.
Vit. A (water dispersible)	66 mg.
Vit. E as d-Alpha-tocopherol Acid Succinate, N.F.	10 I.U.

UPNEOID	**B.L.D.**
Phenylpropanolamine Hydrochloride	20 mg.
Pyrilamine Maleate	25 mg.
Rutin	20 mg.
Ascorbic Acid t	100 mg.
Theophylline Magnesium (or Sodium) GlycinatelOO mg.	

t ascorbic acid to be individually supplemented.

UTEPTOID A

Betaine-Choline Tartrate
Choline-Methionine Tartrate
Inositol
Unsaturated Fatty Acids
(linoleic-linolenic-sitosterol)
Desiccated Liver

UPEPTOID B

Betaine HCI.
Papain
Pepsin
Pancreatin
Diastase
Ketocholanic Acid
Desoxycholic Acid

UTROPHOID B

Thiamin Mononitrate
Riboflavin
Calcium Pantothenate
Para Aminobenzoic Acid

UNOID	**B.L.D.**
Pentylenetetrazol	50 mg.
I. Glutamic acid	200 mg.
Nicotinic acid	50 mg.

Full dosage..... ten years and over
Half dosage.....ages 5-10 years
One-third dosage .....ages 2-5 years
One-fifth dosage .....ages 1-2 years
One-tenth dosage..... under one year old

	PRN
	16%
Pyridoxine	2.2 mg.
Niacin	2.2 mg.

UTROPHOID C	**PRN**
Cyanocobalamin	0.025%
Folic Acid	0.250%
Calcium (Calcium citrate)	0.125%
Cobalt (Cobalt Chloride)	0.005%
Copper (Copper Sulfate)	0.010%
Iodine (from Potassium Iodide)	
Iron (ferrous gluconate)	
Magnesium (from Magnesium Sulfate)	
Manganese (from Manganese Sulfate)	
Molybdenum (from Sodium Molybdate)	
Zinc (from Zinc Sulfate)	

SUPPLEMENTS

Zinc gluconate Calcium Pantothenate
Pyridoxine

	BREAKFAST-DINNER
Potassium Gluconate Magnesium	100 mg.
Niacinamide Thiamin Riboflavin	100 mg.

UPNEOID C	50 mg.
Naphazoline HCI. Pyrilamine	100 mg.
Maleate Chlorpheniramine maleate	
Methyl Paraben Propyl Paraben	150mg.

LUNCH

20 mg. 20 mg. 20 mg. 20 mg. 20 mg. 20 mg.

DINNER	**DINNER**
25 meg.	
5mg.	**66** mg. **66** mg. **66** mg
30 mg.	**66** mg. **3.3** mg. **66** mg.
0.1 mg,	**66** mg.
1mg.	
0.15 mg.	
10 mg.	
1mg	
1.25 mg.	
0.1 mg.	
1mg.	

31.5 mg. 50 mg. 50 mg. 50 mg. 50 mg. 15 mg.

DENTAL ANESTHETIC

Benzocaine USP
Chlorobutanol USP

DIURETIC

Furosemide 40 mg. - two days per week (e.g. Sundays and Thursdays) with breakfast only.

	BREAKFAST-LUNCH
Bone meal contains: Phosphorus	300mg.
contains: Calcium	600 mg.

contains: Vitamin D-3 (natural)* 100-200 I.U. Calcium 130 mg./Magnesium 60mR. from Dolomite 200 mg.

* represents the natural form of vitamin D3 contained in bone meal, or if less than 400 ID would be available daily, natural fish liver oil D3. No crystalline D3 and no form of D2 are ever added to the "U" Series.

Down's syndrome patients in Norway (Mork, 1983). Soviet investigators first learned about the "U" Series in 1961 (Turkel, 1963), and modified it to treat their own Down's syndrome patients (Science Digest, 1972).

This same combination of vitamins, minerals, enzymes, and medications has also improved the intellectual ability of patients with physical features of Down's syndrome in whose cells the third copy of the chromosome could not be found (Turkel and Nus-baum, 1978). These patients may be mosaic for trisomy 21; the third chromosome 21 may be in an unexamined cell line.

Wendy was one such patient. When her treatment with the "U" Series began, Wendy's I.Q. was approximately in the range of 39-49. By 1972, her I.Q., as determined in our office, was at least 80. However, no results of tests made in our own office have been used in this report as evidence of the treatment's efficacy.

Wendy

Wendy was $3^1/_2$ years old when her parents realized that she was not developing normally. Her I.Q. was tested at Case Western Reserve University of Cleveland on her fourth birthday June 14, 1967, using the Cattell scale. At 48 months, her mental age was 21 months. She achieved an I.Q. of 44 and was classified as moderately retarded. Her motor and social behaviors corresponded with her retarded mental age. She was described as being unable to respond to directions. She had severe strabismus, a narrow, elevated palate, and excessive fluids in her body tissues, all commonly associated with retardation (Benda, 1969).

In 1967, Wendy was enrolled in a class for mildly retarded children. The diagnostic impression of the physicians at the Pediatric Clinic of the University Hospitals of Cleveland where Wendy was examined in May of 1967, was "Physical and mental retardation does not seem to fit into any specific syndrome — probably heredofamilial... It was noted on 10-9-67 that the patient is definitely retarded and needs continuous assessment and school planning."

At 4 years 9 months of age, Wendy was tested with the Stanford-Binet Intelligence Scale, Form L-M. Her I.Q. of 49 was within the same range as in 1967. The stimulation of her educational program during the year had not increased her intellectual capacities. Her physical, motor, and social retardation also remained very similar to her I.Q. rating.

Therapeutic Intervention

Treatment with the "U" Series began February 14,1969. At her chronological age of 5 years 8 months, Wendy's wrist bone age was approximately 50 percent of her chronological age. Her femur and tibia bone ages were approximately 75 percent of her chronological age. Her overall appearance was that of a retarded child. She had not spoken a complete sentence to that date, and was still very distractible, with an attention span of 10-15 seconds, at nearly 6 years of age.

The physical and mental effects of the "U" Series therapy on Wendy were immediately apparent. Her attention span increased from 10-15 seconds to ten minutes within two weeks of starting treatment. Within three months, she began speaking in complete sentences, something she had never done before. Within four months, Wendy's rate of growth increased by three times her pre-treatment rate.

Wendy was tested with the Wechsler Intelligence Scale for Children in August, 1969 after six months of treatment. She was 6 years, 2 months old. Her Full Scale Score on the Wechsler was 72. This phenomenal increase, 23 I.Q. points in a little more than one year's time, reclassified Wendy from a moderately retarded child to a borderline child, a jump of two intellectual classifications. The incredulous examining psychologist suggested that the rise in I.Q. was due to Wendy's advancement in age. However, retarded children, especially those with features of Down's syndrome (Oster, 1953), are more likely to test lower on I.Q. tests as they grow older. The increase in I.Q. was particularly impressive under the circumstances of Wendy's environment, which had consistently been very attentive, yet in itself failed *to* increase her capacities.

Improvements in all of Wendy's areas of development increased dramatically within six months of treatment with the "U" Series. At the age of 7 years, one month, she achieved a mental age of 4 years, 10 months on the Stanford-Binet, Form L-M, for an I.Q. of 65. Wendy was again tested in 1971 at the

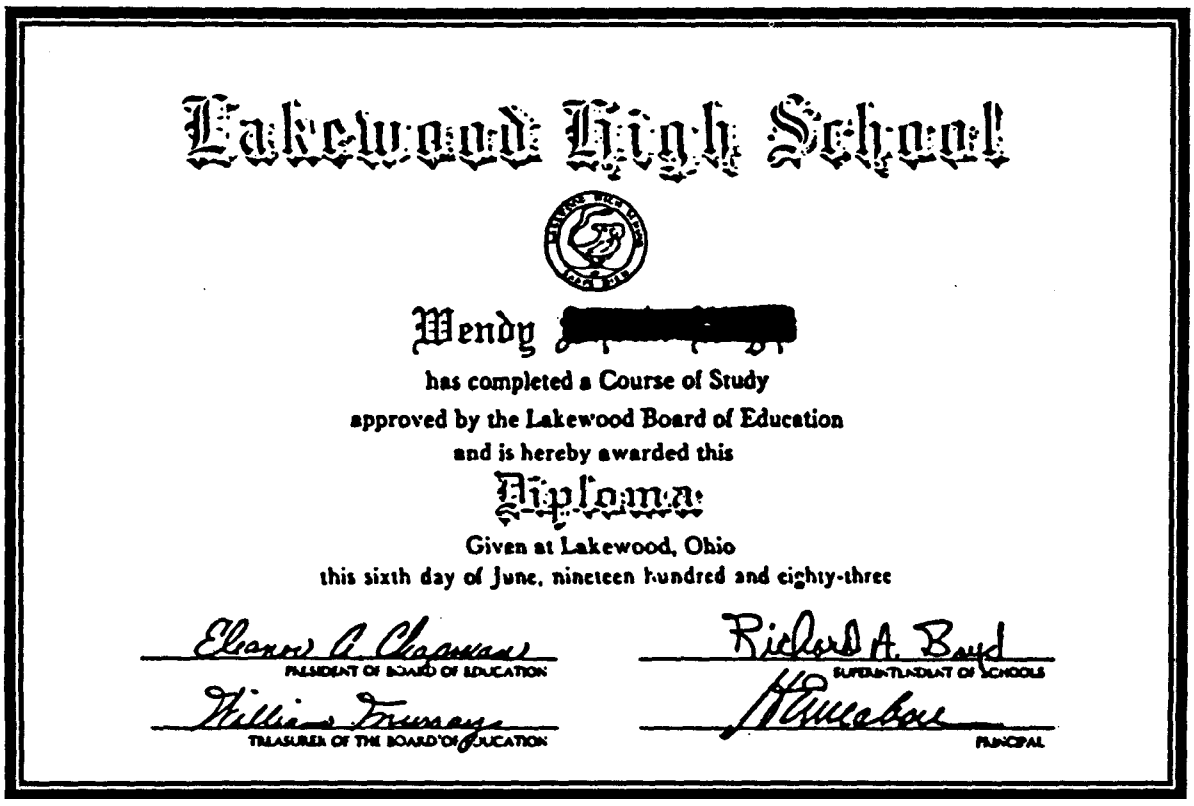
age of 7 years 11 months with the Stanford-Binet, Form L-M. Her I.Q. score of 64 again placed her in the mildly retarded category. Differences between the Wechsler and Stanford-Binet scores can partially be attributed to the greater weight that the Stanford-Binet places on motor skills, a developmental area in which Wendy had lagged.

Comparison of the previous Stanford-Binet 49 I.Q. with the 64 I.Q. shows a very significant increase, especially in only a three-year period. Subsequent school testing with the Stanford-Binet continued to place her in the mildly retarded, almost borderline, range. The Wechsler was again administered to Wendy at age 8. The results attest to her progressive increase in mental ability. She had scored an overall I.Q. of 85, low-average ability. On this test, Wendy earned a Verbal Scale I.Q. of 89, a Performance Scale I.Q. of 85, and a Full Scale I.Q. of 85. Examiner observations confirm her lower motor skills by noting her inability to hold a pencil properly, sit still, or concentrate.

Analysis of Wendy's abilities confirmed that her verbal and perceptual abilities were relatively high but that her motor ability was low. At 9 years of age, Wendy read at a fourth grade level though in the second grade, and was reading newspapers. Her attention span doubled from 10 minutes to 20 minutes in approximately two years. Most certainly, Wendy had developed out of the moderately retarded level into at least the upper limits of the mildly retarded or minimal borderline level (681.Q.). Her school success, however, supports the results of the Wechsler (85 I.Q.), since Wendy functions normally in daily activities.

Wendy has also developed physically under "U" Series therapy. Her strabismus improved from "severe" to "scarcely noticeable." As the retarded development of the dental ridge normalized, her palate widened and changed from "greatly raised" to "nearly normal." By 1974, her bone age had increased to 86 percent of normal. In 1977, her bone age was 94 percent of normal.

The combination of mental and physical growth can be explained only by a treatment that could improve both variables. Wendy was retarded in her physical and mental development for 6 years before treatment with the "U" Series. She improved dramatically



Lakewood High School

Wendy [redacted]

has completed a Course of Study
approved by the Lakewood Board of Education
and is hereby awarded this

Diploma

Given at Lakewood, Ohio
this sixth day of June, nineteen hundred and eighty-three

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in both of these areas within months after treatment began and continued to gain progressively in both areas. She was able to compete against normal classmates throughout her school life, doing average work. She graduated from high school in 1983 and now works in a restaurant.

Conclusion

When the "U" Series was first developed, in 1935, the 47th chromosome associated with Down's syndrome was unknown. Patients were treated on the basis of a clinical diagnosis. Wendy, like many of these earlier patients, presented with physical features characteristic of Down's syndrome as well as mental retardation. During the 5 years and 8 months preceding "U" Series treatment, Wendy developed physically and mentally at less than 50 percent of the normal rate, despite special education. Treatment with the "U" Series significantly accelerated her physical and mental development. Although the "U" Series is indicated primarily for treatment of Down's syndrome, it has also benefited patients with other genetic diseases, including storage diseases (Turkel, 1981), associated with mental retardation. Although its use in the United States has been restricted by the Food and Drug Administration, it has become more widely available both in Japan, where it has been used since 1964 at 80 university or national hospitals, and in Norway, where it may be dispensed by all physicians.

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