

**TRACE ELEMENTS ANALYSIS AND MEGAVITAMINS SUPPLEMENT AS  
INTERVENTION THERAPIES FOR THE TREATMENT OF EPILEPSY IN THE  
LEARNING DISABILITIES CENTRE JOS:  
A PRACTICAL EXPERIENCE**

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**Abstract**

*In this paper, an attempt is made to discuss a practical experience on the trace element analysis and megavitamin supplement as a factor in the treatment of Epilepsy. The paper tries to show how trace element analysis and megavitamin therapy enhance the treatment of children suffering from Epilepsy. The paper also shows the efficacy of megavitamin treatment to address the issues in question based on practical experience and attempts to discuss some vital trace elements recognized as essential for human beings.*

**Introduction**

Trace element analysis and megavitamins deficiencies remain crucial as a factor as well as the intervention for children suffering with Epilepsy cases. Trace elements recognized as essential for man are iron, calcium, copper, manganese, potassium, iodine, selenium, fluoride, chromium, molybdenum tend to be concentrated in the first transition series. The complexes with electronic rich element, such as nitrogen, oxygen and sulphur cannot be over emphasized.

It is essential for scholars, students, practitioners or professionals in the area of identification and assessment in the field of special education to know a lot about the involvement of trace elements/megavitamins supplement as important factor for normal development of brain functions. Hence, we must bear in mind that deficiency of trace element may lead to lots of complications such as Mental Retardation, heart disease and even Epilepsy.

**Learning Disabilities Center Jos at a Glance**

The centre was founded by Professor John Izuka Iheanacho in the 1980s. He established the centre to tackle the problem of learning disabilities and other mental related problems.

The centre started at Matanmi Hospital Masalacin Juma'a Street Jos before moving to its present site at No. 43 Rwang Pam Street Jos. Learning Disabilities Centre Jos had the understanding of the role of mineral substances in the management of Learning Disability and other brain related disabilities and adopt a clinical and scientific approach as an intervention strategy. It is a grand breaking research in the field being that it is the only place where such intervention services are provided. The centre is one

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of the centers in the Africa and the only one in Nigeria where megavitamins or orthomolecular medicine therapy provide clinical services and other brain related disorders. The centre is clinical research based. The treatment or intervention is born out of long scientific research carried out by a team of professionals.

To go by the clinic track of records, the research that form the basis of treatment approach came first in the inter-universities completion in 2005 in Abuja, it back an award from the Third World Academy of Sciences. Furthermore, children with special cases are being referred to the clinic all over Nigeria and beyond. Parents have been relieved from devastating psychological effect of problems handled in the clinic.

Among the cases referred to the clinic that worth mentioning was the one from National Hospital Abuja. Giving that the treatment pattern is based on diagnosis and laboratory analysis of early morning urine testing in a machine called Atomic Absorption Spectrophotometer (AAS).

### **The Concept of Epilepsy**

Epilepsy is a convulsive disorder. It is not a specific disease but a symptom of some abnormality of the brain function. It is characterized by seizure which differs in severity. The affected individuals may show varying characteristic behaviours during a seizure (Ogbue, Obani and Abosi, 1987), Okeke (2001) and Nwagu (1992).

According to Osatunyi (2007), Epilepsy is simply a symptom of intermittent brain dysfunction. It is a term used to describe a wide variety of disorders that are systematic of some abnormality of the brain function. Epilepsy is also looked at as a “part-time” disorder.

Epilepsy is not an infection and cannot be contracted, though, it is a life-long disorder in some cases, however, children sometimes get over it. This disorder is often dramatic and frightening. Parents should take note of these and apply innovative strategies to seek clinical intervention.

### **Mode of Treatment**

At the clinic, first of all, the Anecdotal records/case history will be taken these include, the name of the child, age, sex, the position in the family, the class and so on. The parental records are also taken which includes whether parents are still together or divorced. Then the child’s developmental milestone is also recorded which is classified into pre-natal, peri-natal and post-natal stages.

Following the above records, the second thing is to ask the parents to bring the patient early morning urine sample for elemental analysis.

### **Procedure:**

#### **Elemental Urine Analysis (Electro Spectrophotometer)**

This involves the use of early morning urine of the patient. The patient is asked to bring his/her early morning urine sample. The elemental analysis of this early morning

urine using electro spectrophotometer is used in determining the bio-chemical components, which are deficient in the body system of the person. The result of this analysis will reveal the level of deficiency in the trace elements that cause problem in the brain that result to epilepsy in the child. The clinician or the therapist can now use the result to decide which megavitamins supplements to administer as the treatment.

### What are These Trace Elements?

In bio-chemistry, a trace element is a dietary mineral that is needed in very minute quantities for proper growth, development, and physiology of the organism. Elements that are necessary for life but in only small amount are called trace elements in another word, trace elements are in small quantities but performs different but vital roles in the body. It is stated that there are at least 90-92 elements. Some of these elements are known to be essential to human beings which include elements such as iron, iodine, zinc, manganese, copper, cobalt, molybdenum, selenium, fluorine, chromium and magnesium which are the major elements. Several trace elements are essential for energy production, hormone regulation, and neurotransmissions in the brain. These include the copper, iodine and iron. Other trace elements like calcium and vitamin C in particular, may be considered the work horse of the essential trace elements since it involved in more than 200 enzymatic functions in the body.

The presence or absence of these elements have particularly effect or role to play in the normal development and functioning of the brain as well as entire learning process (Sandstead, M.D 1986).

Trace elements assist in the metabolisms and it enhances the necessary parts of organs of the body. They are readily found in healthy tissues of human beings. They improve tissue functions in man such that any deficiency causes not only physiological and structural abnormalities but also changes the chemistry of the body system. Yet, when trace elements are in greater quantity in the body they pose malfunctioning and dangerous side effects.

### Trace Elements Normal Ranges/Determining Values In Urine Mm01/24 Hours

| Elements  | Normal level      | Determined level in three cases  |
|-----------|-------------------|----------------------------------|
| Sodium    | 100 – 200 mm01/24 | A – 3400<br>B – 2350<br>C – 2560 |
| Potassium | 30 – 90 mm01/24   | A – 3700<br>B – 2500<br>C – 2200 |
| Zinc      | 25 – 100 mm01/24  | A – 5.10<br>B – 0.20<br>C – 0.29 |

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|      |                    |                                 |
|------|--------------------|---------------------------------|
| Iron | 0.05 – 0.4 mm01/24 | A – ND<br>B – 0.025<br>C – 0.17 |
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Source: LDC Jos

**Result of Urine Sample of a Patient with Epilepsy Case Using Electro Spectrophotometer**

Name of Child: Mbane  
 Father's Name: Ndama  
 Mother's Name: Susute  
 Parental Occupation: Civil Servants

**Case History/Anecdotal Records 8/9/2012**

At pre-natal and peri-natal stage there was no problem. At post-natal stage, the other had a normal delivery and was discharged the following day. The girl grew up as a normal child but when she was at 4 years old, one day she hit her head on the wall while playing and fainted right there. She was taken to the hospital and some drugs were administered to her. At age four she began to experience convulsion especially at nights this experience continued monthly and eventually weekly and sometime twice a day. After series of medical intervention in general hospitals there was no desired result until when the parents were referred to Learning Disabilities Centre Jos. At the clinic the therapist took her case history and the anecdotal records. Thereafter, the parents were asked to bring her early morning urine for elemental analysis. The importance of the analysis is to detect the bio-chemical deficiency in her body. This enabled the therapist or clinician to give appropriate megavitamins supplements to support the body.

The results from the urine sample are as follows:

**FIRST TEST RESULT 07/11/2012**

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| Na      | K      | Mg     | Ca    | Fe      | Mn      | Zn      | Pb | Cd | Cu |
|---------|--------|--------|-------|---------|---------|---------|----|----|----|
| 107.001 | 17.451 | 3.2113 | 2.007 | 0.00032 | 0.00071 | 0.00352 | ND | ND | ND |

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Value in mmole/L/24 hours

-ve = No present  
 ND = Not detected

After some megavitamins supplement were given, the second test was conducted on the early morning urine and the result was given as follows:

**SECOND TEST RESULT 09/09/2013**

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| Na      | K      | Mg     | Ca     | Fe      | Mn       | Zn    | Pb | Cd | Cu |
|---------|--------|--------|--------|---------|----------|-------|----|----|----|
| 118.001 | 21.431 | 3.3114 | 2.2003 | 0.00033 | 0.008611 | 0.003 | ND | ND | ND |

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From the two results above, it can be observed that except sodium (Na) that falls within the normal range 100 – 200, all the other elements are below their normal level in her body. The therapist asked her to continue taking the megavitamins for some months. The third urine test was conducted again and the following result was obtained.

**THIRD TEST RESULT 14/2/2014**

| Na      | K      | Mg      | Ca       | Fe      | Mn      | Zn    | Pb | Cd | Cu |
|---------|--------|---------|----------|---------|---------|-------|----|----|----|
| 128.533 | 29.899 | 3.52411 | 2.266734 | 0.00034 | 0.00087 | 0.048 | ND | ND | ND |

A careful analysis from the three results shows that it is evident that all the important elements which were not present are now beginning to be present in her body. The intake of the megavitamins continued as directed by the clinician.

**Comprehensive Report Card Test Result Conducted On 21/2/2014**

Quantum Resonance Magnetic Analyzer Examination showed a significant improvement was equally observed along the deficit traits as noted at the onset of the intervention.

Based on the results from the elemental analyses the following treatment/megavitamins were prescribed for use for the patient by the therapist in the centre to augment the deficiencies.

- Vitamin B1 100mg (thiamine)
- Vitamin B2 100mg (riboflavin)
- Vitamin B3 100mg (niacin)
- Vitamin B6 100mg (pyridoxine)
- Folic Acid
- Calcium 300mg
- Amino Acid 6000
- Vitamin C

Burre (nd) study on effects of megavitamins on the structure and function system concludes as follows:

- Vitamins B6 among others directly involved in the synthesis of some neurotransmitters.
- Vitamin B1 modulates cognitive performance.
- Vitamin B2 needed for converting proteins, fats and carbohydrate into energy necessary for healthy skin and eyes.

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- Vitamin B3 needed for release of energy from food, maintain healthy skin, mouth and digestive tract necessary for normal mental function, can increase circulation and reduce high blood pressure.
  - Folic Acid is essential for growth and reproduction of cells, particularly red blood cells.
  - Calcium builds healthy bones and teeth and blood clotting and help nerves and muscles function properly.
  - Vitamin C in the brain, the nerve ending required the highest concentration of Vit. C to function properly.
  - Amino-Acids are the basic structural building units of protein. They form short polymer chain called peptides or poly peptides which in turn form structure called proteins. Twenty Amino-Acid are encoded by the standard genetic code and are called proteogenic. Combinations of these Amino-Acids produce every single essential protein for the homeostasis of human body.
  - Folic acid is active in the most basic life process that we know. The synthesis of the building blocks of life (DNA) symptoms of too little folic acid is slowed metabolism, constipation and tiredness at in appropriate times of the day. Pregnant women are advised to ensure that intake of folic acid is adequately maintain. It has clinically proven to reduce birth defects, including brain related problem and Down's syndrome.

Burre (nd) said that for long it was fully accepted that food can have an influence on brain structure and thus its functions including cognitive and intellectuals. In fact, most megavitamins/trace elements have directly evaluated in the setting of cerebral functioning (pg. 5).

### **Efficacy of Megavitamins Supplement Therapy on the Treatment of Epilepsy the Practical Experience**

It is amazing to note that since Mbane was placed on the megavitamins supplements, she never experience the seizure again. This shows that the megavitamins had worked on the mineral deficiencies in her brain.

The presence of bio-chemical imbalances improvement in the body enhances proper functioning of the brain. Hence, megavitamins supplements increases minerals which will be an ideal management approach because the therapy has shown remarkable result. Learning Disabilities Centre Jos, has recorded a land mark breakthrough in the management of Epilepsy cases.

According to Stephen (nd) noted a number of physicians now use this approach to treat variety of conditions both mental and physical.

Cott (1972) also believed that megavitamins treatment in many cases can bring desired cure. He maintains that sudden results cannot be expected since it takes 4-6 months before noticeable signs of positive change can occur, and the treatment must be use for years to bring permanent changes. The age at which treatment is initiated is

critical because children below the age of 7 years respond better and more rapidly than those older.

### Conclusion

My personal judgment and experience concerning the treatment therapy using elemental analysis and megavitamins on Mbane to curb Epilepsy syndrome in her, should be encouraged especially to children facing the same kinds of problem.

A number of diet related treatment are presently advocated by various professionals are in use.

The unique treatment of Epilepsy at the LD Centre Jos lies in the use of megavitamins supplements to normalize the trace elements (minerals) that are absent or low in the body using elemental Analysis. It has been found in the centre that Epilepsy disorder could hamper proper functioning of an individual.

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