



InterClinical Laboratories

Newsletter

CLINICAL UPDATES for the Health Care Professional

By Dr David Watts, Director of Research

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Do women with pre-eclampsia, and their babies, benefit from magnesium sulphate? The Magpie Trial: a randomised placebo-controlled trial. *Lancet*, 259, 2002.

These studies included approximately 5000 controls in the placebo group and 5000 in the treatment groups. Interpretation of results found that magnesium sulphate reduced the risk of eclampsia by 50% as well as reducing maternal death.

HTMA studies have shown a metabolic pattern associated with eclampsia in pregnant women as well as gestational diabetes. While there is usually an increase in magnesium requirements other factors are also present and should be addressed on an individual basis.

Value of Magnesium and Calcium in Serum and Hair of Children and Adolescents with Neurological Diseases.

Analysis of children with neurological disease revealed that up to 95 percent of the children were found to have low hair magnesium levels. Low magnesium serum levels were found in up to 44 percent of the children. One case involved a child with hypomagnesemia who was falsely diagnosed as having epilepsy and responded completely with magnesium and vitamin B6 supplementation.

GARLIKA, A. *Przegl Lek*, 57, 2000.

Age-Related Decreases In Chromium Levels in 51,665 Hair, Sweat and Serum Samples From 40,872 Patients—Implications For The Prevention of Cardiovascular Disease and Type II Diabetes Mellitus.

This study shows that hair mineral analysis is a valuable additional tool for assessing chromium status in individuals. This age-related decrease in chromium levels also show the increasing risk for developing blood sugar disorders and related conditions such as lipid disorders, arteriosclerosis and coronary heart disease. DAVIES, S. et al. *Metabolism*, 46, 1997.

COMMENT: *We can add that this decline in individual chromium status may be leading to the current epidemic of adult onset diabetes in children.*

Nutrition and Genetics

A report by Dr. A. Simopoulos in *Nutrition Today*, discusses the genetic variation and individuality of nutritional requirements. He states "Individuality is determined by genes (major genes and modifiers), constitutional factors, developmental, environmental, geography, climate, socioeconomic status, occupation, etc. All sorts of interactions among these sources of variation is possible." He goes on to state that genetic factors determine susceptibility to disease; environmental factors determine which susceptible individuals will be affected." In the paper Dr. Simopoulos concludes that "The interaction of certain nutrients with genetically determined biochemical and metabolic factors suggest different requirements for individuals, which raises questions about the use of universal dietary recommendations for a population when over nutrition rather undernutrition is the concern."

Genetic Variation and Nutrition: Population differences due to single gene defects and population differences in multifactorial disease due to polygenic effects. *Nutr. Today*. 30, 4, 1995.

COMMENT: *This paper certainly supports the existence of metabolic individuality as well as illustrates our views that nutritional requirements should be determined for the individual rather than general recommendations for the population as a whole.*

Hypersensitivity to Molybdenum as a Possible Trigger of ANA-Negative Systemic Lupus.

A 24-year-old woman developed fever and symptoms of ANA-negative systemic lupus (SLE) after implantation of two metal plates. Following removal of the metal plates her symptoms resolved but returned during a patch test of the metal components. Further tests revealed a delayed hypersensitivity to molybdenum. The study concluded that hypersensitivity to molybdenum might be an environmental trigger for SLE. FEDERMANN, M. et al. *Ann. Rheum. Dis.*, 53, 1994.

Chronic Arsenic Poisoning Masquerading as Landry-Guillain-Barre Syndrome (LGBS).

A person with acute arsenic toxicity presents many of the same symptoms as LGBS. Symptoms include weakness, sensory impairment, and gastrointestinal involvement. Symptoms of demyelination are present with early arsenic toxicity as well as early LGBS, but demyelination is present only in LGBS patients.

GODDARD, M.J., et al. *Electromyogr. Clin. Neurophysiol.* 32, 1992

Effective Mood Stabilization with a Chelated Mineral Supplement, an Open-Label Trial in Bipolar Disorder.

To determine the effects of nutritional supplements on bipolar disorder, a study was conducted involving eleven patients diagnosed with bipolar disorder aged 19 to 46. Patients had been taking a mean of 2.7 psychotropic medications each at the beginning of the study. Patients were tested prior to entering the study and periodically over a period of 6 months using the Hamilton Rating Scale for Depression, the Brief Psychiatric Rating Scale and the Young Mania Rating Scale. Results of the study included; symptom reduction from 55 to 66 percent; the need for psychotropic medications decreased by more than 50 percent and significant improvement in the rating scales were noted. In some cases the nutritional supplements replaced the psychotropic medications and the patients continued to remain well. A randomized placebo-controlled trial in adults with bipolar disorders is now under way as well an open trial in children.

KAPLAN, B.J., et al. *J. Clin. Psychiatry.* 62, 2001

UP AND COMING SEMINARS – Perth and Adelaide

Hair Tissue Mineral Analysis in clinical practice.
A metabolic approach to nutritional medicine.
New breakthrough healthcare products.

Speaker, **Mr Zac Bobrov**,
Technical Director, InterClinical Laboratories

Perth Seminar 26th November 2002
Adelaide Seminar 30th November 2002

Bookings and complete lecture details
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