Dietary copper intake reflected in hair tissue mineral analysis

The long-term effects of copper intake were studied to determine the effects of copper status. Nine men were confined to a metabolic research unit for 18 days. They were fed a 3-day rotating menu providing an average of 1.6 milligrams of copper per day. The study continued under free-living conditions for 129 days with copper supplementation of 7 milligrams per day. Hair copper, plasma copper, ceruloplasmin activity, ceruloplasmin protein, plasma malondialdehyde, benzylamine oxidase activity, erythrocyte SOD, urinary copper and urinary thiobarbituric acid-reactive substances were measured. Results found that ceruloplasmin activity, benzylamine oxidase and SOD were significantly higher during the second period of the study. The second period shows that hair copper levels were significantly increased.


Danger of toxic metals in soils underestimated

Heavy metals accumulating in soils from industrial pollution may be poisonous to living organisms. It was once thought that heavy metals could only be taken up by living organisms if they were suspended in or dissolved in water. However research is now showing that living organisms can actually pick up heavy metals and other pollutants from the soil itself allowing these hazardous materials to enter the food chain.


Hair zinc–copper levels and susceptibility to myocardial infarction

A study was performed on patients hospitalised for myocardial infarction (MI) and their descendants compared to a control group. Hair zinc levels were found to be higher and hair copper levels lower in the relatives of patients who suffered from MI compared to controls. Copper levels were higher in the urine of relatives as well. Conclusions of the study stated that: ‘It is envisaged that the MI patients have an operational component of a genetic disorder or ionic imbalance at a young age that can be exploited in making a prediction of susceptibility to heart stroke in individuals before its onset and diagnosis in asymptomatic patients, particularly in genetic and epidemiological studies of MI.


Hair mineral patterns in patients with cerebral infarction

Hair mineral patterns of forty-five patients with cerebral infarction were compared to 20 healthy controls. Results showed a significant difference in patients with cerebral infarct. Zinc, copper and magnesium were lower compared to the non-affected group and manganese levels were higher.

Zhao WX & Li Y (2002). Determination of Zn, Cu, Mg, and Mn in hair of cerebral infarction by AAS. Guang Pu Xue Guang Pu Fen Xi 3.

Copper deficiency and cardiomyopathy

Copper deficiency is known to lead to cardiac hypertrophy in animal models and eventual heart failure. Copper is associated with several critical enzymes such as lysyl oxidase, which is involved in connective tissue metabolism, superoxide dismutase and cytochrome c oxidase, a critical component of the mitochondrial respiratory chain. Animal studies have shown that copper repletion results in regression of heart failure caused by copper deficiency with improvement of contractile function and β-adrenergic stimulation.

Pressure treated wood a potential hazard for children

Pressure-treated lumber has been used in building materials for decades and had not been noted as an environmental problem until recently. However, over the last few decades it has been used extensively in building outdoor decks and playground equipment. Unfortunately, arsenic and other chemical compounds are used in the lumber as a deterrent for insects, fungus, etc. With approximately 40 million tons of arsenic used in pressure-treated lumber annually, its outdoor use has lead to large amounts of arsenic being released into the environment. Children playing on decks and playground equipment are becoming increasingly exposed to arsenic as the wood ages and compounds are released into the air and surrounding soil. Recent studies have estimated that a child could pick-up over 7 micrograms from arsenic-treated wood. As of December 2003, American chemical companies no longer have EPA approval to sell arsenic compounds for treating lumber used around homes. As a protective measure for existing treated wood, it is suggested that it be somewhat sealed through staining or painting.


Vitamin D deficiency and multiple sclerosis

It is known that multiple sclerosis (MS) occurs more often in individuals living in areas far from the equator where less sunlight is available. It has also been found in other studies that people who develop MS are low or deficient in vitamin D. A large study involving over 187,000 women spanning a 20-year period has now been found to reinforce these earlier findings as more women developed MS in the low vitamin D group compared to those adequate in vitamin D intake.


Over the years our HTMA studies have shown that in one form of MS there is an increased need for vitamin D, and not only a deficiency of vitamin D but a calcium deficit as well. In fact, typically in groups diagnosed with MS, a corresponding copper deficiency is also present.

Watts D L, TEI Newsletter 6, 1.

AUSTRALIA AND NEW ZEALAND NUTRITIONAL MEDICINE SEMINAR SERIES 2005

Immunity, Anti-ageing and Degenerative Disease

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SEMINAR OUTLINE

Advanced Hair Tissue Mineral Analysis and metabolic typing.

Recent developments:

New super-food *Dunaliella salina*

Natural carotenoids: immune boosters and antioxidants

Cancer and monobasic calcium phosphate

Copper and molybdenum: reducing heavy metal toxicity with mineral antagonism

Medicinal mushrooms and Reishi spore powder

*Bacopa monniera* (Brahmi):

Memory, cognitive function and ADHD

*Artemisia annua*: Killing those bad bugs

CDP points applied for. CPE points approved.

For the full seminar outline, venues and booking information please see the enclosed Seminar Series 2005 brochure.

BOOKINGS AND INFORMATION:

Australia
InterClinical Laboratories 02 9693 2888

New Zealand
Pacific Health & Fitness 09 815 0707

SEMINAR DATES

**New Zealand**

AUCKLAND Sunday 3 April
WELLINGTON Monday 4 April
CHRISTCHURCH Wednesday 6 April

**Australia**

CANBERRA Tuesday 26 April
NEWCASTLE Tuesday 3 May
BRISBANE Saturday 7 May
BYRON BAY Monday 9 May
COFFS HARBOUR Tuesday 10 May
SYDNEY Sunday 15 May
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MELBOURNE Sunday 22 May
HOBART Monday 23 May
ADELAIDE Tuesday 21 June
PERTH Saturday 25 June
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