

Do I need Magnesium or Zinc?

Over the last couple of months I have attended several very interesting talks given by local doctors here in Perth. Dr David Main talked about zinc and Dr Igor Tabrizian talked about magnesium. It is great to see some of our local doctors finally realising the value of getting the body chemistry right and working with vitamins, minerals and amino acids to achieve this.

These doctors are working with blood levels, (red cell levels, available thru' Clinipath, not just serum levels) much as we are with carnitine levels. In other pages in this newsletter you will find abstracts from other research available on Medline and other medical Internet sources which support the findings we are making here in our own local polio clinic.

Here are some of the pertinent points from these doctors' talks.

In WA our soils are particularly low in magnesium and indeed many other minerals - but we have plenty of calcium! Whereas in USA where most of the research, (particularly on osteoporosis) is done, the situation is reversed.

USA has reasonable soil levels of magnesium but low calcium in the soil.

Magnesium is required for **over 300 enzymes** in the body and in many instances is a necessary part of the production line of various hormones. eg cholesterol needs magnesium, zinc, Vit C & E to become needed progesterone, cortisone, oestrogen and testosterone.

Magnesium is needed for many of the steps in energy production. It is part of every muscle and every nerve cell in the body and is essential to all living organisms. Doctors usually test serum (liquid in the blood) levels but magnesium is not high in serum.

NB. 53% of the body's magnesium is found **in the bones, 27% is in the muscles**, 19% is in soft tissues, including organs like the heart and the remaining 1% is in body fluids, like saliva, sweat, spinal fluid, fat tissue and blood cells, but **only 0.3% is in blood serum**.

from: Shils M "Modern Nutrition in Health & Disease" 1999

Red cell measurement of a number of minerals, including magnesium, is available through Clinipath in WA. However, Dr Igor has found that the range of normal given by the Lab for doctors to interpret the results, will still give deficiency symptoms in the patient unless the levels are in the upper half of the normal range for red cells (not serum levels).

Red Cell Magnesium
given normal levels 1.7 - 2.8 mmol/L
but deficiency symptoms if < 2.3 mmol/L

Zinc is secreted into body fluids as **an antiseptic**. So colds, sore throats, flu, gastro, ulcers, urinary tract infections, thrush will result in low levels as our bodies use zinc to fight infection. Also zinc lowering are - coffee, tea, alcohol, diuretics, ACE inhibitor blood pressure tablets, the Pill, HRT and anything containing the yellow, green, orange food additive tartrazine (102).

A simple home test for zinc, according to Dr Robert Atkins MD in his 1998 book "Dr Atkins' Vita Nutrient Solution", is to take a swig of liquid zinc sulphate heptahydrate (ask for it at your chemist) and swish it around in your mouth. If you immediately notice a bitter taste, you don't have a zinc deficiency. If you taste nothing or have a delayed recognition of taste, your body needs more zinc.



Body zinc is depleted by high carbohydrate diets - grains, & vegies. Calcium supplements and high calcium foods reduce zinc absorption by half. **Stress (physical, emotional or chemical)** as well as pollutions, pesticides and toxic metals **leave us short on zinc**. We lose zinc from the body in sweat, urine, faeces, menses, pregnancy and breast feeding.

One of the **first signs** of zinc deficiency can be **disrupted sleep patterns**. According to **Sherrill, D.L. et al in ARCH. INTERN. MED.**

1998, "Symptoms of disturbed sleep are common in the general population, with overall prevalence rates of between 35% and 41%." So what does this tell us about probable zinc deficiency levels in the general population of USA, let alone WA where we know there is gross soil lack of zinc?

Those with low zinc tend to **eat more frequently**. They may have poor concentration, **poor short term memory** recall, **mental apathy**, eczema, dermatitis, hay fever, allergies, asthma, frequent colds, sore throats, ear infections, thrush, warts. They may be fussy eaters, lose sense of taste and smell, have pre-dinner tantrums, temper outbursts, anorexia or bulimia, acne, teenage depression, be hyperactive or moody. - How about kids & grandchildren?

In pregnancy low zinc results in **stretch marks** and irritability. Post natal depression is more likely. The baby is likely to have **reflux or colic**, require extra frequent feeds and sleep poorly. There is a tendency to **bite fingernails**, have white spots on fingernails (indicates periods of stress eg monthly periods) **smelly feet**, poor healing, **creaky joints, leg ulcers**, and learning disorders.

That persistent cough after a cold or flu will clear quickly with zinc, (and Vitamin D) as will a cold. People with low zinc may have a **persistent runny nose and cough**, react strangely to antihistamines, not recover quickly from illness, develop chronic fatigue, diabetes, high cholesterol, arthritis, depression, cancer.

So mineral deficiencies are very important not only for polio survivors but for other members of our families too. I know zinc has helped my grandchildren and I wouldn't be without magnesium myself.

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