Minerals in Humans

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Many minerals are critically low in New Zealand.

Calcium (Ca), Boron (B) and Magnesium (Mg) need each other with Phosphorus (P), Copper (Cu) and Zinc (Zn), to form bones. Most soils in New Zealand are low in all seven, but Ca should not be taken on its own, and hardly at all, because much of our food has it, but Ca needs B especially, and the others to absorb and complete it.

In a town in China where most peoples' knees clicked (grated) because B was low, in another with ample B, as a micronutrient in their water, joints didn't click. In 1990 taking one 3 mg tablet of B a day, eliminated clicking in my knees. It is also reported to reduce the possibility of kidney stones, as are Mg and vitamin B6. Research in USA, where Mg is low, but in some soils is double ours, showed that Mg deficiency increases the incidence of osteoporosis. Many NZ dairy farmers have fed magnesium to their cows for 40 years, because it increases cow's absorption of calcium to prevent milk fever, and because the Mg supplemented cows produced 15% more milk.

Ca gets ample publicity, but excess Ca on its own can lower both Mg and Zn. White rings around the irises indicate an excess of Ca which has adversely affected the health of some since the exaggerated recommendation to take masses of Ca to reduce osteoporosis. Excess calcium in the blood can cause nausea, vomiting and calcium deposits in the heart and kidneys. Consuming ample dairy produce, vegetables and one 3 mg B tablet a day should be all that is needed. Vegetable growers have to apply lime to keep the soils in good condition and to grow healthy crops and high yield, so eating vegetables, especially legumes supplies ca.

Mg and B (with a little copper if needed and Zn) can improve weak or brittle bones, aching and creaking joints, osteoporosis, arthritis, blood pressure and colon cancer. Most of us get too much copper because so many vegetables and fruit are sprayed with copper and because so many homes have copper piping. Vitamins A (carotene) and D (sunshine) are also needed for Ca to be absorbed.

Boron aids the efficient absorption of calcium, magnesium, vitamin D and phosphorus. 3 mg/day of B reduces the excretion of Ca, Mg and P in urine. Calcium needs Mg to be absorbed in bones. If you question this, search the net for "bone"+"magnesium". Studies have shown that magnesium oxide is the least bioavailable form of magnesium. Many of us are allergic to the oxide form. MP 65 (Magnesium phosphate) is one good form and Magnesium Glycinate is another. Both are available from alternative type health clinics.

When healthy and not deficient in anything because of taking minerals, the skeleton is totally replaced with good dense bone every 7 to 10 years. Osteoporosis can decrease with the above and by consuming ample animal protein in the form of red meat.

In June 2003 pain occurred in my right knee when walking up stairs. An Internet search for sore knee+cause indicated that it was possibly too much fluoride, which is in Hamilton's town water, which I drank a lot of, so we changed to spring water, and three months later my knee was better. We're still on spring water with no knee problems, and we drink more because it is so nice.

In March 2005 at age 73 I had a bone scan for osteoporosis and showed Dr Gorringe of Hamilton Health Clinic. He immediately suspected low B and tested for it. Sure enough I was low so he put my wife Auriel, and me, on to one 3 mg B tablet which we had stopped taking. Three months later Auriel's hip and leg pain of 12 years got 95% better and some joint stiffness I had disappeared.

Some people take Dolomite and/or calcium carbonate (lime) both of which are very hard, so are not easily digested, even with the acid in stomachs. This has been documented. Magnesium Phosphate (MP 65) or Magnesium Glycinate are better absorbed. Both are prescription items so have to be obtained from alternative health specialists.

Leaky Gut Syndrome Diet

When it comes to diet, it is very important to avoid eating toxins and foods that poison. Your diet should contain foods that heal, vegetable juices, fats that heal, also, try to understand food tolerance. You can not find the right Leaky Gut Syndrome diet, unless you fully understand and learn about food tolerance and avoiding toxic ones. Takes time to discover. Chris Rhodes has a fast and very accurate system to measure incompatibility by numbers 1 to 100 so you know how imperative each is to avoid

on eat in small amounts. He has tested 140 of the foods and liquids I eat and has been 100% accurate. Chris Rhodes <cpr@xtra.co.nz> 45 Cunningham Rd, Te Rapa, Hamilton. Naturopathic Clinic. Ph 07-850-6300. Fax 07-850-6011.

Elements in seaweeds and seaweed products

The levels of most elements in kelp, and other seaweeds and their products, are so low that they will not prevent deficiency symptoms in areas very low in any particular element. Some claim that feeding a little kelp will supply some minerals, but as an example kelp copper is between 1 and 10 mg/kg. 13 mg/kg is necessary in the animal's total feed, kelp zinc is between 10 and 50 mg/kg. 40 mg/kg of zinc is necessary in the total ration so, kelp has no more of these elements than correctly fertilised pasture, so feeding it won't increase mineral levels.

The following from a farmer in Maine, USA, is one of many examples that show that there is not enough Se in kelp. "I've fed kelp meal (didn't say which one or how much, and they do vary in quality) and salt for 2.5 years now. Last March, shortly before lambing, we lost a ewe to an unknown cause. The vet during autopsy diagnosed a Se deficiency."

However, the above refers to elements we know of. I'm sure that we don't know all of the beneficial elements present in seaweed and fish products. When gardeners use fish or seaweed products some notice an improvement in plant health, and organic farmers achieve improved animal health, but their cost on a farm scale is not always profitable.

Sea salt has the same elements in higher proportions, so always insist on sea salt in your soluble minerals. Salt from deserts are not leached by rain, so have higher levels.

Citrus Deficiencies

You may wonder why citrus deficiencies should be included. It is because many farms and gardens have citrus trees which show deficiency symptoms, that are not as easy to see in pastures. Also, citrus responds to the applications of deficient elements within months during their growing season, which allows confirming whether a possible deficiency exists on your farm or garden. Ours, like many others, came from the plant shop with mostly yellow leaves shown here at the bottom. After planting it in deep topsoil with some compost, LimeMagPlus and a Gafsa mix fertiliser, both of which have Serpentine, it thrived and is now perfect. After two months it was still unwell and hardly growing. I applied a cup full of serpentine and cultivated it in. Look at the new leaves. I applied twice as much to our old lemon tree and its leaves improved within a month. Serpentine is high in magnesium and has calcium and dozens of other minerals. It formed millions of years ago from evaporating sea water and was later pushed up in the mountains at Aria, west of Piopio. There is also serpentine in Marlborough and Southland. Serpentine is not water soluble and not digestible, but comes up in the vegetables.

Vitamins

Minerals are much more important than vitamins, and, when mineral levels are optimum in correctly limed and fertilised pastures and gardens, most vitamins in the animals grazing it will be where they should be. An example is that low cobalt (Co) in ruminants causes low vitamin B12 which then has to injected into them before some die, while non-ruminants, such as horses, thrive without cobalt. Before learning this in New Zealand, farmers in 1935 on low Co soils, which are usually low in organic matter, as in sand and pumice, were mystified. Organic matter holds Co. It is better to apply Co to the pasture, rather than supplement animals with vitamin B12, because Co is also needed by clovers to make nodules and make N. Good soluble mineral mixes Co to is also advisable.

Another example is that zinc helps animals make their own vitamin A, which improves night vision, and so reduces the risk of animals going through hard to see electric fences at night.

Evidence from the northern hemisphere, where vitamin supplementation of dairy cows has been

researched and done for many decades, shows that ruminants can produce most of the needed water soluble vitamins through consumption and rumen fermentation. However, researchers have found that high producing confinement cows force-fed with concentrates, and not getting fresh clover based pasture, can benefit from supplementing with some vitamins, especially vitamin E which is needed by selenium for it to work.

Vitamin B3 (niacin) is fed to some cows at the rate of 12 grams per day, to avoid ketosis (deficiency of energy through inadequate correct feeding). Some herds are fed six grams of niacin daily for the first 100 days of lactation.

In areas where Se is deficient, Se and vitamin E are added to diets. The vitamin E is for animals not getting green pasture, which contains more than enough vitamin E. It can, however, be deficient in pasture silage because it is destroyed during fermentation.

In New Zealand never take manganese or any supplements containing it (Read Minerals > Manganese and you'll see why). Some prescribe it, but it is high in supermarket non-organic vegetables that most eat.

Vaughan Jones
Agricultural consultant & journalist
GrazingInfo Ltd