

Minerals ~ How do we know we are deficient?

I find there is lack of knowledge around the depletion of essential minerals and trace elements in today's 'farmed and mass produced' foods which are required to maintain optimal health as humans; and am campaigning towards a proactive 'information is power' approach in spreading knowledge on herbs that can help in replenishing these essentials in our diet.

There are 22 known essential to our health minerals and 17 trace elements. And these have diminished in the 21st century diet primarily due to the mineral depletion in dirt used to grow our foods. In fact, studies show there is less than 20% of these minerals present compared to 100 years ago!

Demineralisation of crops is partly due to the use of synthetic NPK (nitrogen, phosphorus and potassium) which has enabled sterile soils to produce global food supplies.

The food produced looks like food but is essentially remineralised.

The information on this decline is easy to find, here is a snippet from 50 Years of Lost Nutrition (ref: <https://blamingnature.wordpress.com/2014/03/04/50-years-of-lost-nutrition/>), and not all to blame on NPK use alone but this certainly adds to the depletion.

I observe many essential minerals and trace elements such as magnesium, manganese, copper, chromium and zinc are not present in these findings and there was a focus on carbohydrates. Pay more attention to this lack of detail for most of our commercial food products.

We live in a world of unawareness around the essential minerals we all require to thrive at an optimal level.

If we look at Nettle Leaf (not a 'forefront offering in your supermarket) rich in magnesium, in its wild form this would contain around 4-6 grams per kilo compared to a cultivated cabbage today at 0.193 grams per kilo.

Referring to the National Library of Medicine, over 100 years ago that same cabbage would have close to 0.723 mg of magnesium!

Broccoli		1950	2001	% diff
	Protein	3.3	2.82	-15%
	Lipids	0.2	0.37	85%
	Carbohydrates*	4.2	4.04	-4%
	Calcium	130	47	-64%
	Phosphorus	76	66	-13%
	Iron	1.3	0.73	-44%
	Vitamin A	3500	623	-82%
	Thiamine	0.1	0.071	-29%
	Riboflavin	0.21	0.117	-44%
	Niachine	1.1	0.639	-42%
	Vitamin C	118	89.2	-24%
Carrot		1950	2001	% diff
	Protein	1.2	0.93	-23%
	Lipids	0.3	0.24	-20%
	Carbohydrates*	8.2	6.78	-17%
	Calcium	39	33	-15%
	Phosphorus	37	35	-5%
	Iron	0.8	0.3	-63%
	Vitamin A	12000	16706	39%
	Thiamine	0.06	0.066	10%
	Riboflavin	0.06	0.058	-3%
	Niachine	0.5	0.983	97%
	Vitamin C*	8	5.9	-26%
Corn		1950	2008	% diff
	Protein	3.7	3.27	-12%
	Lipids	1.2	1.35	13%
	Carbohydrates*	19.7	16.7	-15%
	Calcium	9	2	-78%
	Phosphorus	120	89	-26%
	Iron	0.5	0.52	4%
	Vitamin A	390	187	-52%
	Thiamine	0.15	0.155	3%
	Riboflavin	0.12	0.055	-54%
	Niachine	1.7	1.77	4%
	Vitamin C	12	6.8	-43%

*Carbohydrates = total carbs - fiber

** Vitamin C from carrots is from 1963, the first time it was measured.

Which common herbs can supplement this loss of minerals and trace elements?

Calcium, Magnesium and Potassium: while there are several that are higher and plenty of other minerals that are lower, **peppermint** infuses a good dose of calcium and magnesium into your diet.

Iron, chromium, manganese, selenium and silicon: These mineral and trace elements can be captured in **nettle leaf**: this beneficial herb positions itself nicely in supplying your system with each of these.

How you take these herbs can alter the effect. Tinctures take the medicinally active constituents out of the plant which is then rapidly absorbed across the stomach wall with a rapid pharmacological effect. Teas have increased effect by travelling through the stomach to the lower GI areas and do require preparation for better effect (as minerals are not particularly soluble). Topical absorption is another method used.

Talk to **the herbalist** about preparations and a broader range of herbs and their mineral and other benefits.

Mineral and trace element benefits in peppermint and nettle leaf:

Calcium: Builds and maintains strong bones and teeth. It is also critical for blood clotting, nerve signaling, and muscle contractions, including the beating of the heart.

Magnesium: Acts as the body's relaxation mineral. It regulates hundreds of enzymatic reactions, helps lower blood pressure, manages blood sugar, and supports energy production.

Potassium: Serves as a vital electrolyte that maintains fluid and electrolyte balance inside the cells. It offsets the blood pressure-raising effects of sodium and ensures steady heart rhythms.

Iron: The core component of hemoglobin in red blood cells, carrying oxygen from the lungs throughout the body. It is also necessary for energy metabolism, hormone production, and maintaining a healthy immune system.

Chromium: Enhances the action of insulin, directly assisting in blood sugar regulation and glucose metabolism. See more about this on next page.

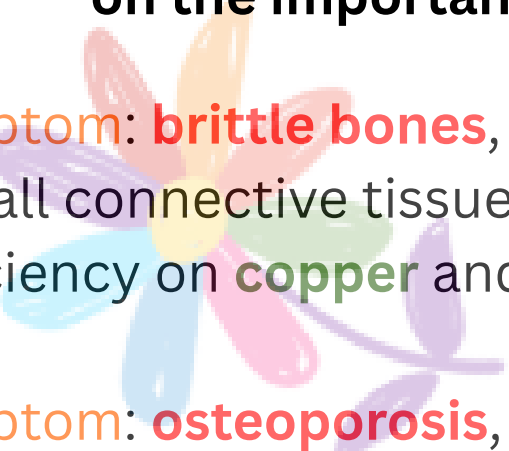
Manganese: Acts as a key structural component and activator for various enzymes, aiding in the metabolism of carbohydrates, cholesterol, and amino acids. It also plays a role in bone formation and antioxidant defense.

Selenium: A potent antioxidant that defends cells against oxidative stress. It is vital for DNA synthesis, reproductive health, and healthy thyroid function.

Silicon: Promotes bone formation and helps maintain the structural integrity of connective tissues, skin (collagen and elastin), and cartilage. It also supports the correct assimilation of calcium and magnesium for bone mineralization.

Other mineral benefits:

While this article is a limited cover, this provides you an idea on the importance around these minerals.



Symptom: brittle bones, joint pain, bruising, organ issues, overall connective tissues become weak, this could be a deficiency on **copper** and **silicon**.

Symptom: osteoporosis, a reduction in **boron** can cause decreased bone metabolism (causing osteoporosis).

Symptom: emotional imbalance, this is well documented with prisoners when they lack **lithium** (vegetables) in the diet. And now we have the added detriment of mineral depletion within those vegetables.

Symptom: insulin resistance, occurs when the body's cells don't respond effectively to insulin. Let us say we eat carbs, this pushes sugar into the blood, the pancreas secretes insulin and the insulin binds to the cells and says, 'take in the fuel' (sugar) and clears the blood sugars. **Chromium** allows these sugars to bind to cells, as you can see an essential part of clearing the sugars from our blood, if missing or deficient we achieve insulin resistance (as rise in blood sugar levels).