

Minerals Matter

ENZYME & HORMONE COFACTORS

There are nearly 100,000 enzymes and 50 hormones in the human body, many of which require specific minerals to function. Insulin cannot function without chromium. Thyroid hormones need iodine. Cobalt is needed to synthesize vitamin B12 in the gut. Selenium and zinc are needed for healthy sexual function in men. The list goes on and on!

MASTER REGULATORS

For example, calcium does more than just make strong bones. It also helps maintain proper blood pH (which must be tightly regulated between 7.35 and 7.45). If the blood becomes too acidic, calcium is pulled from your bones to make the blood more alkaline. Conversely, if the blood becomes too alkaline, calcium is transferred back into your bones.

CELLULAR TRANSPORTERS

Minerals help facilitate the transfer of nutrients across cell membranes and ensure a proper balance of sodium and potassium inside and outside of cells.



MACROMINERALS

- calcium
- phosphorus
- magnesium
- sodium
- potassium
- chloride
- sulfur

MICROMINERALS

- chromium
- copper
- iodine
- iron
- manganese
- molybdenum
- selenium
- zinc

mineral balance is a game of cofactors

your body cannot synthesize minerals and must instead obtain them from food (this means eating a nutrient-dense diet and optimizing digestion, hydration, and fatty acid balance)

SOURCES OF MINERALS

- **LEAFY GREEN VEGETABLES**
vegetables—especially leafy greens—are packed with many essential minerals (choose local or organic when possible, enjoy with fat to help absorption)
- **SEA SALT, SEAWEED, & SEAFOOD**
foods from the sea are an excellent source of macro- and microminerals (such as zinc from oysters and iodine from seaweed)
- **MINERAL WATER & BONE BROTH**
you can drink your minerals too (clean mineral water and homemade bone broth are 2 easy ways to enjoy minerals)

SOURCES OF KEY MINERALS



Calcium

broccoli | sardines | beans
lentils | almonds | seaweed
sesame seeds | leafy
greens | cheese

Magnesium

avocado | black beans
potato skin | almonds
various seeds | edamame
dark chocolate | spinach

Sodium

Celtic sea salt | pickled
vegetables | sauerkraut,
celery juice | artichoke,
beets | Swiss chard | olives

Potassium

avocado | banana | dates
potatoes | melons | seeds
coconut water | nettle tea
squash | beet greens

Zinc

oysters | legumes | oats
pumpkin seeds | meat
seafood | potato | eggs
dark chocolate

Selenium

brazil nuts | chard | oats
bananas | egg | seafood
turkey | beef liver | chicken
brown rice | baked beans

Phosphorus

SAD diet = too carbonated
beverages | chicken
turkey | organ meats
seafood | dairy

Iodine

iodized table salt | kelp
seaweed | shellfish | eggs
beef liver | kelp | wakame
Nori | dairy

Sulfur

cruciferous vegetables |
eggs | garlic & onions
nuts & seeds | meat
seafood | dairy

Copper

beef | beans & peas | Brazil
nuts | sunflower seeds
cashews | organ meats
oysters | chocolate

Iron

beef | beans & peas | Brazil
nuts | sunflower seeds
cashews | organ meats
oysters | chocolate

Chloride

salt | processed foods
fermented foods | lettuce
seaweed | lettuce
celery | olives

Chromium

seaweed | liver | mussels
broccoli | turkey
orange juice | grape juice
Brewers yeast

Manganese

peanuts | hazelnuts
raisins & prunes | leafy
greens | clams | oysters
rice | legumes

Molybdenum

lentils | peas | beans |
black eyed peas | lima
beans | rice | nuts
potatoes | beef

HAIR TISSUE MINERAL ANALYSIS (HTMA)

A GAME CHANGER FOR HEALTH!

HTMA. This functional test has become one of my favorites – for all my clients. It offers insight into digestive health, thyroid function, adrenal health, inflammation, heavy metal toxicity, mineral imbalances, immune function, and more. Not only is HTMA affordable, and provides incredibly valuable insight, but it's also accurate.

WHAT IS A HTMA?

HTMA is a screening test that uses soft tissue mineral biopsies (from hair) to provide a reading of the intracellular mineral levels and heavy metal deposition in the hair.

Hair is body tissue in which minerals get deposited in very specific patterns. This ultimately, when properly interpreted from a skilled practitioner, provides us with a blueprint for your unique body's biochemistry. The hair tells your nutritional history has proven to be an effective way to glimpse how your body is responding to your environment (nutrition, toxicant, stress, metabolic processes and more).

FIND OUT ABOUT YOUR MINERAL LEVELS

1. Take our mineral quiz, click [here](#)
2. Read our most recent blog on how minerals can support your body, click [here](#)
3. Check your mineral levels by running your own HTMA, click [here](#)

What an HTMA can reveal



- Mineral Deficiencies and Imbalances
- Heavy Metal Toxicity
- Metabolic Rate (fast or slow oxidation)
- Optimal Macronutrient Ratios (for your oxidation type)
- Adrenal Dysregulation
- Thyroid Function
- Nervous System Imbalances
- Protein Synthesis
- Inflammation
- Energy Levels
- Mental Health Issues
- Blood Sugar Imbalance

WHO CAN BENEFIT?

Everyone can benefit, that's another cool thing about this screening tool. It's non-invasive, and can be done at home with only a teaspoon level of hair. I have used the HTMA with the following clients and each has had great success in bringing their main health challenges back into balance by following the nutritional guidelines and lifestyle adjustments their receive in their Roadmap to Health.