The Science NOT Opinion
e-Newsletter
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# Essential Minerals Nature Intended

Minerals are non-protein co-factors that allow enzymes to work.[1] Minerals and vitamins are termed coenzymes, which means they need each other in order to work properly. When you get minerals and vitamins in the proper ratio and in the most bio available form, your complicated life processes can work up to a **million times more efficiently**.[2]

Your body can't make minerals; like vitamins, they must come from the food you eat or from a supplement. Many mineral supplements are available on the market today, but few are in the proper form for absorption and utilization by your cells. If you're not getting the right one, you are throwing your money away.

In order to be utilized by your body, minerals need to be properly chelated, that is, chemically linked to an amino acid.[3] **Most beneficial nutritional substances must be coupled with a protein or amino acid (naturally chelated) to enter your body's cells**.[4] In opposition to this, colloidal minerals are held in vascular blood system meaning they are **not used at the cellular level**.[5] Digestion must be bypassed for maximum mineral effectiveness. This requires the following conditions:

- Smallness in size (colloidal minerals are too large to get into your cells)
- PH-stability in a very acidic environment
- A form compatible with how your body assimilates food. (Naturally or truly-chelated = tied to amino acids).

Unfortunately the popular colloidal mineral's **don't hold up in these critical areas**. Colloidal minerals aren't even "dissolved." They are in suspension. The definition of a colloid is "suspended in liquid." This has **nothing to do with the efficiency of absorption** by the body it just means that the mineral is "floating in a liquid."

Many people don't realize that **most of our foods still contain sufficient vitamins**, but are lacking the minerals needed to utilize the vitamins most effectively. A diet based on the foundation of animal-based protein while supplementing with the highest quality minerals, will provide all you need of these important nutrients.

**The Professor's NEWSFLASH!**

## Fiber leeches minerals out of your system.

**A diet high in fiber can deplete you of the essential minerals you need** to stay healthy. Unlike a cow or a goat, our digestive system **isn't designed to handle large amounts of fiber**. A little goes a long way for us with regards to digestion and elimination. A cow has 4 stomachs to break down fiber to get to the vitamins and nutrients, as well as chewing constantly, swallowing, regurgitating, and chewing even more. This is natural for them, but completely unlike the human process of eating. In fact, the digestive system of a cow and other herbivores is so vastly different from a human's that it's like an alien by comparison.

Another way to deplete minerals is to drink too much water. It isn't necessary to force water down. Drink when you're thirsty, but overdoing it can be harmful. A person who exercises or perspires a lot will need more water, but someone who leads a less active lifestyle won't need 8 – 12 glasses a day.

**Iron and other minerals are not available to humans through plant sources**.

Plants contain phytates, which **biochemically lock up minerals in plant fiber, rendering them unusable to us.** This effectively makes minerals as well as the nutrients in fiber **unusable by human cells.** In the *Journal of Clinical Nutrition*, 2000, it was reported that, **"**women **eating the most fiber** ***and the*** **lowest amount of fat had 20% lower calcium retention." I'll discuss a bit about calcium later in this newsletter.**

Frequent consumption of foods containing artificial flavors, colors, MSG, and other additives can **diminish the effectiveness of the immune system without the aid of minerals**. Though the body can synthesize some vitamins, it cannot manufacture a single mineral. So you need minerals to offset food additives.

**Be wary of so-called "fortified" foods** that contain added minerals. The mineral may be "in there" but there are **no guidelines requiring food manufacturers to use a bio available (usable) form**. The bottom line: Even though the mineral is added to the product, very little may actually get used by your body.

**Some essential minerals are missing in modern foods**

Due to cost, and over-farming the same land over and over, our soils are depleted of organic matter and trace minerals. Every time a crop is harvested, organic matter and trace minerals are removed from the soil. Synthetic fertilizers do little or nothing to replenish these depleting materials. Most artificial fertilizers have no organic matter, humus, organic acids, microbes or sugars and are missing essential minerals as well.[6]

The data available on the subject of soil depletion and animal deterioration are so voluminous that it is impossible to present them adequately here. When we realize the quantities of many of the minerals which must enter into the composition of human bodies and other animals, we appreciate the difficulty of providing in modern pasture and agriculture soils a concentration of these minerals sufficient to supply the needs for plant growth and food production.[7]

There are 8 specific minerals that we all need, but are not available to us through most foods: Iron, Magnesium, Zinc, Selenium, Copper, Manganese, Chromium, and Boron.

**The Professor's NEWSFLASH!**

## Calcium supplements are not the answer for Osteoporosis

The *Textbook of Medical Physiology* clearly states: **Supplemental calcium is not needed because there is a sufficient amount of calcium in food for proper bone development**. It also states that a lack of calcium has nothing to do with osteoporosis.

The causes 6 causes for osteoporosis are as follows.[8]

1. Lack of physical stress on the bone – from inactivity.
2. Shortage of protein – so the bone matrix can't be formed.
3. Lack of vitamin C.
4. Postmenopausal lack of estrogen. (estrogen is made from EFAs)
5. Old age – decreased growth hormone and other hormones inhibiting bone matrix. (hormones are made from protein and EFAs)
6. Cushing's disease (adrenal tumor).

**Notice that lack of calcium is NOT listed!**

Osteoporosis results from diminished organic bone matrix rather than from bone calcium."[9] Bone needs to have a good balance of strength and flexibility in order to stand up to stress and avoid fractures. The list above tells us what our bones need to be strongest and avoid breakage and weakness. Think of your bones like a very hard rubber, with just enough flexibility to avoid fracture but strength to give you your solid frame. **Bones shouldn't be like concrete that cracks and doesn't give**.

The definition of osteoporosis has been "changed" by the drug manufacturers: Osteoporosis is the most common of all bone diseases in adults, especially in old age. It is a different disease from osteomalacia and rickets because it results from diminished organic bone matrix rather than from poor bone calcification.[10]

Bones are affected by hormones, consist of protein and fats, and need to get these nutrients to be healthy and strong. This is precisely why **one of the most important nutrients for bone health is animal-based protein**. This is the foundation for healthy bone matrix. While a diet rich in natural fats like cheese will provide all the calcium you need, without supplementation.

In closing, To get the minerals you need, be sure the supplement you take contains minerals that are truly-chelated. Avoid colloidal minerals, and rather than taking a calcium supplement, be sure to eat natural cheeses, creams and yogurt.

(Endnotes)

1 *Basic Medical Biochemistry: A Clinical Approach,* pg. 109. Dawn B. Marks, Allan D. Marks, Colleen M. Smith, Lippincott, Williams & Wilkins, August, 1996, ISBN: 068305595X

2 *Enzymes,* D.A. Lopez, M.D., R.M. Williams, M.D., Ph.D., K. Miehike, M.D., published by the Neville Press, Munich, Germany, 1994.

3 *Albion Research Notes - A Compilation of Vital Research Updates on Health nutrition,* Albion Laboratories, Clearfield, UT, Volume 6, No. 2, June 1997.

4 *The Physiology Coloring Book,* plate 75., Wynn Kapit, Robert Macey, Esmail Meisami, Benjamin/Cummings, 15 January, 2000, ISBN: 0321036638

5 *Body Fluids and Electrolytes*, pgs: 62-63.

6 The Natural Way - Just Say No To Artificial Fertilizers And Scalping, *The Dallas Morning News,* Friday March 7, 1997, Howard Garrett.

7 *Nutrition and Physical Degeneration*, by Weston A. Price, McGraw Hill - NTC; 15th edition (June 2003) ISBN: 0879838167. (out of print).

8 *Textbook of Medical Physiology*, pg. 998, Arthur C. Guyton, John E. Hall, W B Saunders Co., January 15, 1996, ISBN: 0721659446.

9 *Ibid*

10*Ibid*

If you have any questions of comments about this month's newsletter please e-mail the professor at: prof-nutrition@sbcglobal.net

# This Month's Low-Carb Recipe: Orange Basil Pesto Chicken

**INGREDIENTS**

1/2 cup basil leaves
2 tablespoons grated orange peal
2 garlic cloves
2 teaspoons coconut oil
3 tablespoons orange juice
1 tablespoon dijon mustard
Salt and pepper to taste
6 chicken breast halves or 6-8 thigh halves

**PREPARATION**

1. Preheat broiler at 450 degrees.

2. With a food processor, finely chop basil, orange peel and garlic. Then add oil, orange juice, mustard, salt and pepper and process until paste forms.

3. Spread equal amounts of mixture on both side of each piece of chicken.

4. Place chicken skin-side down on broiler pan and place 4 inches from heat. Broil 10 minutes then turn chicken over and broil 10 to 12 minutes more or until chicken is no longer pink in the center.

Note: If chicken browns too quickly, cover with foil.

Enjoy!