

Vitamins

&

Minerals

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everyone has their favorite "one time I was at the mosque" horror story. These stories circulate so often with some of them being so outrageous that it is easy to pass them off as tales of urban legend. They happen so often that these types of situation are part of the fabric of our community and we often accept them as "normal." As if rudeness is an acceptable thing. When I find myself on the receiving end of one of these unpleasant encounters I can not help but think that the person would do well to take a B-complex vitamin. I often tell my husband that on *Jum'aah* (Friday Prayer) I want to stand at the entrance and hand out drinkable vitamin C packs and B-complex vitamins to everyone there. Why would I want to do such a thing? I want to do this because when a body is well nourished, the mind is well balanced. When a mind is well balanced, the soul and heart are full, content and at peace. When one reaches this state or station as the Sufis term it, you do not feel the need to lash out at others. Does this seem like a bold statement? Then let us look at the evidence.



Vitamins and minerals are termed micronutrients not because they are insignificant to the diet, but because they are required in smaller amounts. If you recall the last installment of this series on macronutrients (fats, carbohydrates and protein), are all required in larger amounts and must be consumed in order for the body to absorb the vital micronutrients. This is particularly true of fats. When adequate amounts of fat is not eaten, the body is not able to absorb a whole class of vitamins, the fat-soluble vitamins, which include E, A, K and D. The lack of vitamins and minerals play a significant role on how our bodies and minds function and even how we feel about ourselves. Certain vitamins and minerals (like B5) found in organ meats, egg yolks and whole grains, help the body deal with stress and feed the adrenal glands (Falon, 39). Vitamin C also feeds the adrenal glands and helps the body deal with stress. A deficiency in B12, found only in animal foods, particularly organ meats causes "a tendency to irrational anger"(Falon, 38). A deficiency in B complex vitamins is linked to mental disorders such as depression and anxiety. Before we proceed, let me explain what vitamins and minerals are.

Vitamins were first recognized in foods in the early 1900s and were considered "vital to life." Vitamins derive the second part of their name "amine" from the first nutrient discovered, nitrogen (Whitney, 321). It was this discovery that ironically set in motion our current fertilizer (mostly nitrogen) based farming practices that renders so much of our food supply devoid of vitamins and minerals. At first nitrogen brings up more minerals, but over time it depletes the soil. As a result, some commercially raised oranges were found to contain no vitamin C (Fallon, 36). Poor soil is a major cause of vitamin and mineral deficiency.

Currently there are 13 recognized vitamins; some being water-soluble and the others are fat-soluble. There are eight water-soluble vitamins- thiamin, riboflavin, niacin, pyridoxine, biotin, pantothenic acid, folic acid and vitamin B12 as well as vitamin C. Water-soluble vitamins require water in order for the body to break them down. Since they are water soluble, they must be replenished daily. The

fat-soluble vitamins A, E, D and K, require undamaged fats (butter, oils, and bile that are released by the liver) to be absorbable. B12 requires bile, although not fat-soluble. The fat-soluble vitamins are stored in various places in our body and so is B12 (Murray, 17).

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Minerals are derived from the soil and the healthier the soil, the more mineral rich food will be. There are seven major minerals, calcium, chloride, magnesium, phosphorus, potassium, sodium and sulfur. There is almost an endless list of trace minerals, including, zinc, iron, boron, manganese, copper, iodine and selenium. If as Muslims we believe that Allah created Adam and by extension humanity, from clay, it is not surprising that many life giving substance derive from soil. Sally Fallon in her wonderful book *Nourishing Traditions* states, “The trace minerals known to be essential to life now exceeds thirty, and some researchers believe that for optimal health we need to take in every substance found in the earth’s crust.” (Fallon, 40) The exceptions are heavy metals, such as mercury, lead, aluminum and cadmium. These substances are toxic to the body. Also, they will fit into the receptor sites for minerals, if the mineral is not present and disrupt the harmony of the inner workings of the body. This is particularly relevant due to the toxicity of the world we live in. A deficiency of just one vitamin or mineral can have serious effects on our body’s ability to function.

Minerals and vitamins mostly function in the body as important components and cofactors in enzymes. N.D. Michael Murray describes enzymes as “molecules involved in speeding up chemical reactions necessary for human bodily function. Coenzymes are molecules that help the enzymes in their chemical reactions.” (Murray, 7) If enzymes do not contain their cofactors, they cannot perform their job. When each enzyme is provided with its cofactor, the body runs smoothly and we are free of pain, fatigue, apathy, anger, depression and disease.

Another important function that some minerals have (sodium, potassium, magnesium, calcium and sulfur) are as electrolytes. They charge each cell and provide them with energy for the body to work. Many times someone who is feeling chronically fatigued, is not receiving enough voltage at the cellular level. However, it may only be one piece in a very large puzzle. Electrolyte balance is a key component in maintaining health.



Although all vitamins and minerals are important, there are a few that are particularly important due to the environment we live in. One class of nutrients is the anti-oxidants. Everyday our bodies are exposed to oxidative damage (similar to the rust on metal) due to normal processes of our body like breathing, sun, air pollution and bad diets all require antioxidants to minimize the damage caused by oxidative stress, such as aging, dark

spots and disease. Vitamin C, A, E and selenium are antioxidants. Most of these work together. Selenium requires vitamin C to reach optimal absorption levels. The recommended intake of selenium is 200 mg a day for women and 250 mg a day for men. Abundant sources of selenium are whole grains, fruit, beans and blackstrap molasses. Vitamin C is set at 1000 mg a day for women and 800 mg a day for men.

When one is in a state of healing, vitamin C is required in even higher dosage. Broccoli, red bell pepper and brussel sprouts all contain vitamin C.

Due to our current global circumstances, the immune boosting substances that help us cope with physical and emotional stress are also required in large amounts. I cannot stress enough the need for zinc and the B complex vitamins. There are too many vitamins to mention them individually here. It is more important to see them as a team. They support healthy nerves, skin, eyes, liver and heart. Fallon points out, "A deficiency in the B vitamin complex can result in the enlargement and malfunction of almost every organ and gland in the body." (Fallon, 38) Zinc is a co factor in 100 enzymes and is needed for proper growth, regeneration and for a healthy immune system. It plays a key role in DNA creation, which has profound implication for Auto Immune diseases. The recommended intake for men is 20 mg a day and 17 mg a day for women. Zinc can be found in raw milk products, shellfish and red meat.

Due to American diets containing large amounts of processed and refined foods, Americans are deficient in trace minerals and B complex. There are many enriched and fortified foods in the market place to combat this problem, but they are poor substitutes and are often not absorbed in the body and sometimes, in the case of synthetic vitamin D in milk, toxic. Iron, calcium and other fortified foods are not a sane approach. Just look at the ever-increasing calcium fortified products and the sky rocketing incidents of osteoporosis indicates that these fortified foods are a waste of money. Since American's consumption of nutrient dense foods declined over 100 years ago, the Federal Drug Administration (FDA) established a standard Recommended Daily Allowance (RDA). This standard is far below what is needed to maintain health. A better choice is in the Suggested Optimal Daily Nutritional Allowances (SONAS).

Dietary supplementation is a popular health focus today and is a major industry. However useful supplements may be to restore severe nutritional deficiencies, they remain to be a poor substitute for a nourishing diet. Eating real food is the best way to insure adequate intake of these essential units of life.

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