



Just this morning, my wife complained that "she is not a pill taker, can you make a patch?" My response was, "that's funny, just earlier today, someone complained that she wasn't getting enough pills!" No one takes pills happily. Nor do we happily pay our taxes. We do it because we have to. If we don't take supplements, the chances are we will be taking pharmaceuticals (other pills), aging or feeling badly.

The debate over supplementation rages on. Since supplements work subtly and slowly, it is often hard to clearly discern their effect. Like building wealth for retirement, health accumulates and then, when we're older, we can tap into that asset. Does supplementation improve the quality and prolong the quantity of life??

There are quality scientific articles on nutrition from all over the world, indexed in pubmed.gov, the government database of medical articles. There are thousands of articles documenting significant deficiencies across the globe, including America. "Eating well" and eating organically can help, but there are factors that dominate these well-intended actions. The main cause of deficiency is mass food production. Toxicities make it worse.

There are extremely fit 80 year olds who physiologically act 60 or younger. Whether it's the daily yogurt, coffee, whiskey, walk, music, or just good genes, we don't need research to state the obvious: if some people can remain healthy, then many can.

**Target Levels**

A common notion is that "Americans have the most expensive urine". The argument is that we pee out excess nutrients. However, if we applied that concept to water, should we then reduce water consumption until we stopped peeing water? Creatures that don't pee die. So the role of water is to carry out other molecules that cannot otherwise be excreted. The same is true of vitamins and minerals--they do work on the way in and on the way out.

Many of the RDA's were set in the 1940's, after the discovery of nutrient deficiency diseases (rickets, scurvy, pellagra, beriberi) in the prior decades established the important role of specific vitamins. However, the levels set then were based on preventing these diseases. Getting the minimum of a nutrient has very different effects than getting the optimum amount. If we provide minimum, we get minimum. Same with children and plants. We are all "insufficient" which means deficiency, not not enough to kill us quickly.

To this day, we do not know optimum values. Population "norms" are just that--the norm of the population studied. If the whole population is prone to obesity, heart disease, or cancer, that's what "normal" values represent. Individual biochemistry that we partly inherit and partly nurture can set us apart from the norm. Required intake of certain nutrients such as Vitamin D or Magnesium may vary by 10 times or more across the population.

If everyone in a population is deficient in a known nutrient, such as iodine, lithium or niacin, **then this can affect the norm of every other nutrient, and of the population! Past research may be rendered obsolete with one major discovery!** What if epidemics of ADD, breast cancer, diabetes and depression were 50% preventable with supplementation? This is what happened in the early 1900's with other nutrients. History is repeating itself, again.

**Supplementation Strategies<sup>1</sup>**

1. Start slow, remember that the primary goal is sustainability!
2. Start once a day with the biggest meal of the day. Supplements supplement food.
3. DO NOT CHANGE MEDICATIONS OR ANY OTHER MAJOR FACTOR (I.E. FOOD PLAN, TRAVEL) WHILE INITIATING A NEW SUPPLEMENT
4. If there is any history of digestive problems, upper or lower, supplements to support the digestive system may be indicated.
5. Priority for most of us are: omega-3 oils, Vitamin D (with A, E and K2), minerals, (including iodine and lithium), probiotics and Vitamins B & C at levels higher than the RDA's of the 1940s.
6. Review your supplement program with all prescribers and ideally all practitioners
7. If on medications, check medication levels as supplements can change absorption and processing.
8. Ideal timing for food-based supplements is twice a day or some with each meal. Non-food based supplements often have optimal timings over the circadian cycle.
9. Learn about your supplements. Understanding their important role in maintaining health (and saving cost in the long-term) helps sustainability. You may not feel their subtle effects for months.
10. When possible, levels should be checked every 3-4 months until a stable baseline is established. 30% of the time a level does not go up significantly and 10% of the time a level goes down with or despite supplementation. While most supplements are safe, some can build to toxic levels. Serious lows are common, even with supplementation.

**Malnutrition vs Malabsorption:**

Simply stated, malnutrition means the nutrients are not getting into the mouth, while malabsorption means the nutrients are not getting from the gut into the body. Most of us have some of both. As discussed above, global malnutrition is well established scientifically. Malabsorption is a huge topic, but factors that can contribute include: chronic stress, medications, antibiotic use, and chronic stealth infections, often due to ecological imbalance of the gut. This also affects brain, allergy, immune, hormonal and autonomic functions.

**Liquids, Tablets, Capsules and Topicals**

Once you decide what you intend to take regularly, the next step is to figure out formats and brands. Studies regarding venue have not demonstrated a consistent winner. The ingredients, coatings, and molecular forms of the nutrients affect tolerance and absorption. Two ways to "prove" absorption is by appropriate levels (serum, red blood cells, urine, other) and/or by a consistent positive clinical response.

Due to concerns about toxicity (such as with Vitamin D) and competition (such as between O3 and O6 oils), measurement (when available) is always preferred. The cost often offsets the losses involved in taking the wrong levels for months at a time.

It is getting easier. The comfort and incorporation of supplements into a lifestyle will grow in importance as the costs of health care and awareness increase. Prevention is always cheaper than correction.

**IMPORTANT NOTES:**

1. **This educational material may not be used to influence medical care without supervision by a licensed practitioner.**
2. These contents are ©2017 by Michael Cheikin MD and may not be reproduced in any form without express written permission.
3. Dr. Cheikin's website has related articles such as "Food Plans", "Frankenfoods", "Leaky Gut Syndrome" and others.

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