

Healthy Foundation Takes Better Nutrition to the Streets, Classrooms

The Healthy Foundation, a California non-profit organization, has been working to actualize the public health potential of good nutrition by making daily multivitamin supplements available free of charge to homeless individuals, indigent families and marginalized elderly people at risk for nutritional deficiency.

Over the last 5 years, the Foundation's "Vitamin Relief USA" program has distributed multivitamin/multimineral tablets to tens of thousands of people at risk for serious nutritional deficiencies and the attendant health consequences. Comprised of five distinct projects reaching specific subpopulations, Vitamin Relief USA is now active at 250 urban and rural sites in 41 states.

A host of studies show that increasing vitamin and mineral intake can markedly improve the lives of vulnerable people, especially children and adolescents. In one survey of 1.1 million school children, improved diet led to a 16% improvement in academic performance, and a nearly 50% reduction in the number of kids diagnosed with learning disabilities. Another study involving 80

juvenile delinquents showed that daily multivitamin/mineral supplementation reduced antisocial behavior by approximately 40% after three months. In a comparison of schoolchildren from Arizona and California, those who took supplements improved academically at twice the rate of those who did not.

Several studies have shown that increasing nutrient intake to current DRI levels or better can increase IQ in at-risk children. Improved nutritional status can even improve academic performance in children with significant learning difficulties.

Poor nutrition correlates with violence. In a study of incarcerated adults, there was a clear inverse correlation between nutritional status and violence: inmates who were the most violent offenders had the lowest daily vitamin intake. The good news is this is reversible. A study of over 8,000 juvenile offenders showed that improved diet alone reduced violence and nonviolent antisocial behavior by 48%.

The Healthy Foundation endeavor began by providing lunchtime multivita-

mins to people at a homeless shelter in San Luis Obispo, CA. Since then, it has grown to include many other centers serving homeless people throughout California. The "Senior Support" program, a pilot project, was begun to address the startling levels of malnutrition among elderly people. The program now provides basic nutrition to 1,100 indigent, at-risk seniors. The Foundation plans to expand this program nationally in the near future.

The Foundation's two programs for kids, "Children First," and "Operation IQ," now serve over 13,000 kids. A separate program called the Better Student Research Initiative is providing a "real world" laboratory for studying how vitamin intake and nutritional status affect academic performance.

The hallmark of the Healthy Foundation's projects is that they bring the nutrients to places where those in need are to be found. Partner sites include public schools, Head Start and Healthy Start programs, homeless shelters, foster care settings, public health departments, faith based community service groups, and hospital outreach programs.

The nutritional supplements, as well as financial support for their distribution come largely from corporate leaders in the natural products industry, including Tishcon, Wyeth, Rexall-Sundown, Capsugel, Natural Factors, Rx Vitamins, Longevity Science, and New Hope Natural Media. Other philanthropic groups

as well as private donors have contributed to the Foundation as well.

Last year, the Foundation's efforts caught the attention of Congressman Frank Pallone (D-NJ) and Sen. Tom Harkin (D-IA), ultimately resulting in a \$500,000 appropriation from the federal Department of Education that will allow the Foundation to undertake an in-depth study of the impact of vitamin intake on school performance of at-risk children.

Adam Perlman, MD, director of the Institute of Complementary and Alternative Medicine at the University of Medicine and Dentistry of New Jersey, will lead the trial. It will involve 1,500 fourth-graders in an urban New Jersey school district, who will be randomized to receive daily vitamins or placebo. The investigators will assess a host of outcomes including standardized test scores, grade point averages, lateness, absenteeism, and behavior.

The Healthy Foundation's website (www.thehealthyfoundation.org) includes a research library with several thorough and excellent reviews of the science on how nutrition affects behavior, intellectual development, and physical health. To learn more about the Healthy Foundation and to make a contribution, visit the site or write to: The Healthy Foundation, PO Box 888, Murrieta, CA 92564-0888. Tel. 951-696-0552. ☺

Multiple Choice

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now available, targeting every imaginable demographic. But there is surprisingly little consensus as to what a good multivitamin ought to contain. Mr. MacWilliam's book is among a number of independent efforts to define rational criteria for multivitamins and to rank popular brands accordingly. Others efforts include the Center for Science in the Public Interest's (CSPI) "Best Bites" series, and ConsumerLab's product testing program. All of them, while stepping in the right direction, have their limits.

Mr. MacWilliam's *Comparative Guide* ranks over 500 commercially available multivitamins against a "Blended Standard" profile of 39 vitamins, minerals and other nutrients. In the absence of definitive national consensus guidelines beyond the RDAs and DRIs, Mr. MacWilliam derived the Blended Standard by averaging recommendations made by 7 authors who have published their own criteria for optimal daily preventive nutrition.

The authors cited are: Phyllis Balch, CNC (*Prescription for Nutritional Healing: The A-to-Z Guide to Supplements*), Michael Colgan, PhD (*The New Nutrition: Medicine for the New Millennium*), Earl Mindell, PhD (*Earl Mindell's Vitamin Bible for the 21st Century*), Michael Murray, ND (*Encyclopedia of Nutritional Supplements*), Richard Passwater, PhD (*The New Supernutrition*); Ray Strand, MD (*What Your Doctor Doesn't Know About Nutritional Medicine May Be Killing You*), and Julian Whitaker, MD (*Dr. Whitaker's Guide to Natural Healing*). These writers did not participate directly in creation of the *Comparative Guide*.

CSPI's "Best Bites" guidelines take a similar overall approach. They look beyond the RDAs and DRIs, citing the most recent prevention trials to determine optimal levels of key vitamins and minerals. They then rank products according to the degree to which

their stated nutrient levels compare with these standards (view the CSPI guidelines at: www.cspinet.org/nah/4_00/pickamulti.htm). In general, both CSPI's criteria and the *Comparative Guide's* Blended Standard call for nutrient levels higher than the 2001 DRIs, but with few exceptions, neither exceeds the NAS's established Upper Limits for safety.

When compared against the Blended Standard, the top 10 multivitamins in the *Comparative Guide* are: USANA Health Sciences' Essentials; Douglas Laboratories' Ultra Preventive; Vitamin Research Products' Extend Plus; Source Naturals' Life Force Multiple; Source Naturals' Elan Vital; USANA's Essentials (Canadian formulation); FreeLife's Basic Mindell Plus; Life Extension Foundation's Life Extension Mix; Karuna's Maxxum 4; and Ultimate Nutrition's Super Complete.

While there are many excellent products on the market, Mr. MacWilliam said he was "surprised by how many products scored poorly." Low-scoring products included some very well known consumer brands such as Centrum, One-A-Day, Solgar and Schiff.

"There are a lot of products out there just emulating the old RDA's. Our standard raises the bar fairly high because we were trying to set a standard for optimal nutrition. A lot of products, including some big brands, are fairly mediocre from that viewpoint."

Incomplete Evaluations

The *Comparative Guide's* approach to standard setting makes sense in principle. But critics have charged that a number of the experts whose recommendations went into the Blended Standard have relationships with USANA, the multi-level marketing company that had several high-scoring products, including the number one ranked multivitamin. Though Mr. MacWilliam himself has been on the scientific advisory board for USANA, he dismisses the notion that the book is intentionally or unintentionally biased to support USANA.

"The purpose was to try and develop criteria based on the most current science. Any bias in the criteria reflect the biases of the individual cited authors, and these are weighted in a lot of different directions," Mr. MacWilliam said. While some authors have relationships with USANA, others have relationships with other nutritional companies including Natural Factors and Solgar.

The biggest limit of the *Comparative Guide* methodology, and one that applies equally to CSPI's rankings, is the exclusive reliance on product labels. Mr. MacWilliam acknowledged that he and his colleagues did no analytical chemistry to determine if the levels of vitamins indicated on product labels are actually in the pills or capsules. "By reason of sheer cost, we could not test actual chemical constituents of all these products."

ConsumerLab, an independent consumer information company focused on dietary supplement quality, does at least some analytical chemistry on at least some products. Founded by Todd Cooperman, MD, a physician, and William Obermeyer, PhD, formerly a natural products chemist with the FDA, ConsumerLab (CL) looks at supplements with an eye toward determining if what's stated on the label is actually in the bottle.

For its recent multivitamin report, CL tested 24 off-the-shelf products to see whether their formulas contained the labeled levels of vitamin A (β -carotene and retinol), vitamin E (natural or synthetic), vitamin D, folate, ascorbic acid, B vitamins (niacin, pyridoxine, riboflavin), calcium, iron, zinc, magnesium and manganese. CL also tested for disintegration (a stand-in for absorbability) and lead contamination.

Only 14 of the 24 "passed," meaning that the pills, capsules or liquids contained at least 100% but not more than 150% of the amount of each of these nutrients stated on the product labels (CL's multivitamin report, as well as reports on other product categories are available at www.consumerlab.com).

There were some surprising failures, notably the popular Theragran-M formula, which contained over 3 mcg of lead per daily serving, and Futurebiotics Advanced Women's Formula, which did not deliver the amount of vitamin A stated on the label. Both products are manufactured by Bristol-Myers Squibb.

Though CL does attempt to put some chemistry into its product assessment, the main problem with this system is that at best it can only validate label listings; it does not provide any guidance on whether the nutrient levels in a given product are adequate to provide meaningful disease prevention benefits. In other words, a product may very well contain what it says it does, but if this level is inadequate to produce any health benefit, its value is questionable.

CL has only tested a small fraction of the multivitamin products currently in the market. Interestingly, there were relatively few overlaps between products analyzed by CL and products ranked by the *Comparative Guide*.

Given the wide variety of multivitamin products, not to mention variance in the quality of their manufacture, it is not surprising that clinical trials with multivitamins have had such variable outcomes. Health care practitioners, nutrition scientists, and many supplement industry leaders agree that there is a dire need for new standards for optimal nutritional supplementation, and an equally pressing need for valid and unbiased methods of evaluating vitamin products.

All agree, however, that this is a long way off. Such an endeavor will require considerable amounts of money, not to mention high levels of cooperation across disciplines and industries. But the profound impact of chronic degenerative diseases and the preventive and therapeutic potential represented by optimal nutrition, will hopefully provide motivation for rapid movement in this direction. ☺