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Doctor's Corner

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Take Your Vitamins: Reviewing Scientific Approaches to Selecting Daily Multiple Supplements

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About the Contributor

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Americans Need More Nutrients

The U. S. population is drastically malnourished. According to the latest A. C. Nielsen survey, only 12% of Americans claim to eat the 5 recommended servings of fruits and vegetables each day (Warner, 2004). And approximately 1/3 of the calories that people do consume are from nutrient-poor foods such as alcohol and soda (Yang, 2004). This combination has led to a population that consumes too few nutrients, which according to an article in the *Journal of the American Medical Association* (Fletcher, 2002) puts people at risk for long-term health concerns.

With Americans eating fewer healthy foods, taking a daily multiple is one way for people to increase their intake of nutrients. But the search for what defines a

good multiple can be confusing, even to health care professionals.

The Confusing U.S. Government Standards

Scientists first recognized the need for vitamins in the early 1900s (Levenstein, 1993). But setting U. S. government standards for vitamins and minerals didn't start until healthy soldiers were needed to fight World War II. And when a committee of scientists was asked to determine the levels of nutrients needed to maintain good health they could only agree on "recommended allowances" to prevent deficiency with a wide margin of safety. In 1941, these allowances became the first Recommended Dietary Allowances (RDAs) for the nation (Levenstein, 1993). In 1997, the Food and Drug Administration (FDA) used latest RDAs to set the new Dietary Reference Intake (DRI) standards, which included Adequate Intakes (AIs) for when there was insufficient evidence to determine an RDA, and Upper Intake Levels (ULs) as the safe daily upper limit. To simplify the information, food labels express nutrient information as a percentage of the Daily Value (DV), which includes RDA values for a healthy adult who consumes 2000 calories per day (Whitney, 2002). However, these values do not include AIs or ULs and many individuals need different levels of nutrients than these.

Confusing Standards equals Confusing Recommendations

The RDAs and subsequent DRIs are the basis of the nutrient standards for at least 40 different nations and many professional health organizations. Currently, the American Dietetic Association (ADA) recommends that people who cannot reach the DRIs through diet take a multiple with nutrient levels that do not exceed the RDAs (*JADA*, 2001). And in 2002, the American Medical Association (AMA) published a paper that included a recommendation for all adults to take RDA levels of vitamin supplements in their *Journal of the American Medical Association* (Fletcher, 2002).

Despite the benefits of having guidelines, most people only hear about the RDAs and DVs, which may be too low for preventing deficiencies while the ULs and AIs, which can be much more beneficial are rarely discussed. For example, the Daily Value of Vitamin E to prevent deficiency is 30 IU while the daily Upper Intake Limit is 1,467 IU. But, according to the ADA, as many as 75% of cardiologists recommend vitamin E to their patients to promote heart health, usually at a dosage of 400 IU (ADA, 2001; Meydani, 2004; & Whitney, 1998). And the Daily Value for Vitamin C is 60 mg while the daily Upper Intake Limit is 2000 mg, but in clinical studies it took 500 mg per day to help maintain healthy blood pressure (Whitney, 1998, & Hendler, 2001).



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Alternative Recommendations

Lyle MacWilliam is a biochemist and former health advisor to the Canadian Ministry of Health, who decided to research, analyze and publish the *Comparative Guide to Nutritional Supplements*. In this book, the individually published recommendations from seven nutrition experts (Phyllis Balch, CNC, Dr. Michael Colgan, Ph.D., Dr. Earl Mindell, Ph.D., Dr. Michael Murray, N.D., Dr. Richard Passwater, Ph.D., Dr. Ray Strand, M.D., and Dr. Julian Whitaker, M.D.) were combined to create an ultimate blended standard of recommended median intakes for 39 nutrients to promote health. Those nutrients include vitamins, minerals, phytonutrients, and other supplements, that span 14 different health categories and are much closer to the Upper Intake Limit government standards. The guide also includes information about recommended forms, safety, purity and quality (MacWilliam, 2003).

One of the most profound differences between MacWilliam's compiled recommendations and the DRIs is the difference in the number of supplements: 39 vs. 26 respectively. The *Comparative Guide* standard includes additional nutrients, including many more antioxidants, based on decades of clinical research about their benefits. For example, the fat-soluble antioxidant Coenzyme Q10 that your body manufactures less of as you age is included. So is the fat and water-soluble antioxidant alpha lipoic acid that helps recycle other antioxidants such as vitamins C and E (Hendler, 2001).

Top Ranked Multiples for Optimal Health

In the latter half of MacWilliam's book he uses this ultimate blended standard to rank and compare 500 manufactured multiples. Of the five top-ranked multiples, only the

Source Naturals multiples, Life Force and Élan Vital, are widely available at natural product stores and health outlets. And the new and improved Life Force formulation now rates higher than any of the products evaluated in the current edition of this guide (MacWilliam, 2004; & MacWilliam, 2003).

The ingredients that can be found in today's multiple supplements can vary greatly. But multiple choices don't have to lead to confusion. Health professionals, such as Lyle MacWilliam, understand the importance of remaining curious, evaluating the available research, and conferring with other scientists to determine the nutrients that support optimal health.

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