



### New RDAs set for antioxidants

FOR at least a decade, foods and supplements containing antioxidants have been fervently promoted. These antioxidants are chemicals that protect cells from damage by the normal wear and tear of cellular oxidative stress. Fruits and vegetables contain especially high amounts of antioxidants.

Two weeks ago, the National Academy of Sciences released their new recommended dietary allowances for antioxidant nutrients. These include vitamins C and E, the mineral selenium, and carotenoids (like beta-carotene).

About every 10 years, the NAS gathers experts to update the RDAs. This committee reviews past recommendations, the reasons behind them and the most recent information available. Many medications affect nutrient requirements. Therefore the RDAs are only meant for healthy individuals.

THE new recommendations also contain recommendations for upper intake levels or ULs. UL values represent the maximum intake of a nutrient that is likely to pose no risk to health in the general population. Just like the RDAs, these values do not apply to people with specific health problems.

ULs were established to provide guidelines on how much of a nutrient is too much. ULs are particularly handy with the increased use of dietary supplements. Even with nutrients, too much of a good thing can increase the risk of disease.

The RDA for Vitamin C has been increased to 75 mg/day for women and 90 mg/day for men. The recommendations are based on the amount of vitamin C that maintains near maximal tissue levels without excess loss of the vitamin in the urine. To obtain 90 mg of vitamin C, drink 6 fluid ounces of orange juice or eat a large orange.

The upper limit for vitamin C for adults is 2000 mg/day from both food and supplements combined. In our opinion, this UL value is extremely liberal and very recent studies may cause this value to be revised downward.

The Vitamin E RDA for adults was slightly increased to 15 mg/day. This translates to 22 International Units of natural vitamin E or 33 IUs of the synthetic form usually found in dietary supplements. This recommendation was based on the amount of vitamin E necessary to maintain normal antioxidant function of vitamin E de-

pendent systems in the body.

THE adult UL for vitamin E applies only to the upper limit for dietary supplements and does not include vitamin E from food. The UL is set to 1,100 IUs of synthetic vitamin E. Vitamin E can act as an anticoagulant in the blood, increasing the risk of internal bleeding.

Anyone taking anticoagulant drugs such as coumadin should realize these values are much too high for them. This is an especially good example of why these recommendations are meant only for healthy people.

The adult RDA for selenium is now 55 micrograms per day, the UL is 400 micrograms a day. Exceeding this can cause hair loss and fingernail problems.

The RDA panel decided not to set RDAs for beta-carotene and other carotenoids. Research is inadequate to set specific numbers. However, the committee cautioned against high supplemental doses.

Is the RDA or UL better for longterm health? That still isn't known. However, we intend to eat more fruits and vegetables and keep supplement intake at about three times the RDA but less than half the UL.

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