

**COUNCIL FOR RESPONSIBLE NUTRITION (CRN)**

**WASHINGTON, DC, USA**

**Comment in response to**

**CL 2004/13-NFSDU, April 2004**

**Nutrient Reference Values (NRV) for Food Labelling Purposes**

This Circular Letter requested comments on the possible update of the Codex Nutrient Reference Values (NRV)—CAC/GL 2-1985 (Rev. 1 - 1993). This request originated in the discussion by the CNFSDU of Section 5.5 of its draft Guideline for Vitamin and Mineral Supplements. We note that at the November 2003 meeting (the 25<sup>th</sup> Session), the Chairman assigned the delegate of South Africa to lead an electronic working group to develop a recommendation to be considered at the 2004 meeting the CCNFSDU (the 26<sup>th</sup> Session).

The Council for Responsible Nutrition (CRN) is pleased to have this opportunity to offer the following analysis and recommendations:

**ANALYSIS**

The purpose of the NRV, as stated in CAC/GL 2-1985 (Rev. 1 – 1993), is to “convey an understanding of the quantity of nutrients contained in the product” and to provide a quantitative basis “for labelling purposes in the interests of international standardization and harmonization.” There is no assertion in this guideline on the meaning the typical consumer is likely to assign to the specific numerical value shown on the label.

If the only purpose were to compare the quantity of nutrients in the product with those in another product any standardized value could serve that function—that is, any percent of the recommended intake for any group, if used across all foods, could serve as the basis for comparing different foods.

CRN believes that the typical consumer is likely to assume that if a specific food contains a specific percentage of the NRV for a nutrient, consumption of the reference quantity of the food is likely to provide specified percentage of his/her daily needs for the nutrient.

The European Commission Scientific Committee on Food has already recognized this common perception and use of the NRV as nutritional advice to the consumer (SCF/CS/NUT/GEN/18 Final, 6 March 2003, section 4, page 3).

Commonly, among authoritative scientific bodies such as the Institute of Medicine (IOM) Food and Nutrition Board (FNB) in the United States, the Recommended Dietary Allowance (RDA), or an equivalent term used by the scientific authorities in other nations, is defined as the mean (i.e. arithmetic average) requirement plus an increment to meet the needs of all members of the population not more than two standard deviations (2 SD) above the mean requirement. An RDA, by definition, meets the identified needs of a

large majority of the population, at least for the health functions used to identify the RDA. Thus, an NRV based on the RDA would indicate that consumption of 100 percent of this amount would meet the needs for most persons.

In contrast, an NRV based on the average requirement (the Estimated Average Requirement, or EAR, as described by the IOM/FNB) would indicate that consumption of 100 percent of this amount would have only (approximately) a 50 percent probability of being adequate for the typical consumer. This results from the fact that in a normal population distribution of requirements, approximately half are above average and half are below average. CRN submits that there are only two scientifically justified uses of the average requirement (EAR): (1) as the starting point in calculation of the RDA, and (2) as the central point in estimations of the fraction of a population that is likely to deficient or sufficient in nutrient status with a specified actual intake.

After the basis of the NRV is selected (either the recommended intake or the average requirement), another important choice must be made, and two possibilities are most often considered: (1) the highest values from the different age-gender groups (such as premenopausal adult females for iron), or (2) a population-weighted average the values. If the purpose of the NRV used on the label is nothing more than to compare foods, any basis will serve this purpose, as long as it is consistently applied. If consuming the NRV quantity of a nutrient is taken as an indication of adequately meeting individual needs by a substantial fraction of the population, the population-weighted average is not an acceptable choice. In contrast, use of the highest age-gender group value as the basis of the NRV would assure adequate nutrition to most consumers who read the label.

The only reason to not use the highest age-gender group values in establishing the NRV would be if this led to excessive intakes for any group. With currently identified RDA and tolerable upper intake level (UL) values, such possibilities would not occur if separate NRV were established for adults and children. In the U.S., the labeling values apply to all individuals of 4 years or greater age, except pregnant or lactating women. The possible problem of excessive intakes prompted by labelling values would be effectively avoided by establishing the adult NRV to apply only to those 13 years or older, and not to children of 4 through 12 years.

## **RECOMMENDATIONS**

1. With progress in the scientific information available on the functions of and needs for the vitamins and minerals, the CNFSDU should recommend updated NRV values, including:
  - a. Updated numerical value to reflect the most recent scientific data on benefits and needs, using appropriate international sources that consider the needs of different populations and regions.
  - b. NRV values for additional vitamins and minerals not addressed in CAC/GL 2-1985 (Rev. 1 – 1993). For supplements and conventional foods, all of the following nutrients should have NRV: vitamin E, vitamin K, biotin, choline, pantothenic acid, chromium, manganese, phosphorus, and omega-3 fatty acids

although the latter is outside the context of the draft guideline on vitamin and mineral supplements, under which this request for comment originated.

- c. To expedite the work and to keep the context to the CCFNSDU Draft Guideline on Vitamin and Mineral Supplements, CRN recommends that the NRV be revised in two phases: (1) an updated and complete list of vitamins and minerals, for direct application of paragraph 5.5 of the vitamin and mineral supplements guideline, and (2) other nutrients such as amino acids and fatty acids, which could be the subject of future CCFNSDU guidelines on supplements and would have immediate usefulness in the labelling of conventional foods.
2. The NRV should be defined and used in labelling as applicable to persons 13 years or older, but not to younger children.
3. The NRV should be based on the
  - a. Recommended Dietary Allowances (RDA), or equivalent terms as used by different authorities, and the
  - b. highest RDA values from the different age-gender groups, among those 13 years and older, in order to protect consumers with the highest nutrient needs.