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JOINT OFFICE: Viale delle Terme di Caracalla 00153 ROME Tel: 39 06 57051 www.codexalimentarius.net Email: codex@fao.org Facsimile: 39 06 5705 4593

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES **Twenty-ninth Session**

DISCUSSION PAPER ON THE PROPOSALS FOR ADDITIONAL OR REVISED NUTRIENT REFERENCE VALUES FOR LABELLING PURPOSES

(Prepared by Republic of Korea with the assistance of Australia, Brazil, China, European Community, Germany, Indonesia, Malaysia, Paraguay, South Africa, Switzerland, Venezuela, United States of America, CRN, IADSA, ICGMA, ISDI and NHF)

BACKGROUND

At the 25th Session of the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU), the Committee decided that there was a need to update the Nutrient Reference Values (NRVs) that had been established following the Helsinki Consultation (September 1988). It was noted that the establishment of recommended daily intakes would require an Expert Consultation in order to consider available scientific evidence. However, the Committee could consider the update of NRVs for labelling purposes, including specific numerical values, or it could leave it to national regulators to establish such values. The Committee agreed that a circular letter would seek proposals for the addition or revision of the NRVs for labelling purposes. The proposals were to be submitted for consideration by an electronic working group (EWG) coordinated by South Africa.

At its 26th Session, the Committee agreed that the purpose of the revision of NRVs was to establish reference values for the purpose of labelling that would apply to all foods and that the discussion paper should address the following issues:

- Principles for the establishment of NRVs, taking into account the guidelines developed by member countries in this area
- NRVs for different population groups
- Revision of the current list of nutrients

At its 27th Session, the Chairperson drew the attention of the Committee to the fact that the purpose of NRVs as recommended by the Helsinki Consultation was to serve nutrient labelling purposes and not about finding optimum nutrition and that it should concentrate on developing general principles regarding the establishment of NRVs for vitamins and minerals so as to protect consumers against misleading information. The Committee agreed that the EWG should continue to develop the discussion paper with the focus on:

- Principles for the establishment of NRVs for labelling purposes
- NRVs for different population groups, taking into account discussions and comments made at that Session.

At its 28th Session, the Committee noted the proposal of the delegation of European Community (EC) that the revision of NRVs was very important work and should be continued in order to establish NRVs for adult population and infants from 6 to 36 month and that the work should focus on establishing NRVs for vitamins and minerals with the understanding that a revised paper would be considered at the next session of the Committee. The delegation of South Africa indicated that they had no capacity or resources to continue working on this document. The Committee thanked the delegation of South Africa for their excellent work and accepted the offer of the delegation of Republic of Korea to lead further work on this matter with the understanding that a revised Discussion Paper would be considered at the next Session of the Committee.

DISCUSSION PAPER

This revised Discussion Paper further considers the issues in the 2006 Discussion Paper¹: principles for the establishment of NRVs for labelling purposes; and NRVs for different population groups. The draft version of this Discussion Paper containing several questions posing for consideration by the EWG was prepared and circulated in March 2007. The final version of the Discussion Paper presented to the 29th Session of the Committee incorporates revisions based on the comments from several EWG members² and proposes several recommendations to facilitate the discussion at the meeting.

RECOMMENDATION

The Committee is invited to consider the discussion and recommendations given in this revised Discussion Paper with a view to reaching agreement on the scope of nutrients and population groups for current work first. Then the Committee would move on the development of principles for the establishment of NRVs for labelling purposes by using the attached draft as a starting point for discussions.

I. OVERVIEW OF CURRENT NUTRIENT REFERENCE VALUES

1. The 16th Session of the Codex Alimentarius Commission (CAC) adopted *the Guidelines on Nutrition Labelling* (CAC/GL 2-1985) in 1985. The guidelines provided that numerical information on certain nutrients might be expressed as a proportion of Reference Recommended Daily Allowances (RDAs), which were based primarily on a single group of consumers.
2. At the 17th Session of the CAC in 1987, the Commission recognized that the guidelines covered only some nutrients and called upon FAO and WHO to convene a meeting of experts to advise RDAs for labelling purposes to the Commission. Following deliberations of the Commission and the support of the government of Finland, a Joint FAO/WHO Expert Consultation was held in Helsinki, Finland, in 1988.
3. The recommendations of the Consultation for food labelling purposes were summarized as follows;
 - The Consultation reviewed all available data on the recommended intakes of nutrients established at national and international levels as well as the Reference RDAs of the *Codex Guidelines of Nutrition Labelling*.
 - The Consultation recommended the term “Nutrient Reference Values” (NRVs) for reference values derived for use for nutrition labelling, in order to avoid confusion with the recommended nutrient intakes (RDAs/PRIIs).

¹ CX/NFSDU 06/28/08 October 2006. Discussion paper on the proposals for additional or revised nutrient reference values for food labelling purposes.

² Argentina, Australia, Brazil, Costa Rica, EC, Indonesia, Japan, Malaysia, Switzerland, USA, CRN, IADSA and NHF

- The Consultation also considered the possibility of recommending different labelling requirements for specific consumer groups. However it was recognized that labelling provisions for individual foods for special dietary uses, such as foods for infants and children up to the age of 3 years, were specified in standards for these products, and the population groups above 3 years of age ate the same foods, for the most part.
 - Therefore the Consultation concluded to list only a single series of NRVs for 9 vitamins (A, D, C, thiamin, riboflavin, niacin, B₆, folic acid and B₁₂), 5 minerals (Calcium, Magnesium, Iron, Zinc, Iodine) and protein, which were in general based on the Reference RDAs for adult men.
4. The Consultation report was presented to both the 16th Session of the CCNFSDU and the 20th Session of the Codex Committee on Food Labelling (CCFL). The CCFL agreed with the principal conclusions of the Consultation report and also agreed to amend Section 3.3.4 of the *Codex Guidelines on Nutrition Labelling* as proposed, with the understanding that Section 3.3.4 was subject to revision in accordance with new scientific data. And CCNFSDU was requested to develop general principles to guide the choice and amendment of NRVs. The Commission adopted the current NRVs in the *Codex Guidelines for Nutrition Labelling* (CAC/GL 2-1985, Rev.1-1993) at the 20th Session in 1993.

II. PURPOSE OF NUTRIENT REFERENCE VALUES

5. The main purposes of NRVs are to help consumers compare the nutrient content of different food products and estimate the usefulness of a food product in terms of its percentage contribution to the overall healthful diets.
6. The *Codex Guidelines on Nutrition Labelling* (CAC/GL 2-1985, Rev. 1-1993) and *Codex Guidelines for Vitamin and Mineral Food Supplements* (CAC/GL 55-2005) indicate the NRVs as a basis for expressing nutrient content in nutrition labelling of all foods including conventional foods and food supplements. The *Codex Guidelines for Use of Nutrition and Health Claims* (CAC/GL 23-1997, Rev. 1-2004) also indicates NRVs as a basis for criteria for nutrition and health claims.
7. The establishment of Codex NRVs for labelling purposes is intended to facilitate the goals of protecting consumers' health and ensuring fair practices in food trade.

III. SCOPE OF NUTRIENTS AND POPULATION GROUP(S) FOR NRVs

8. Based on the comment from an EWG member, the components and organization of Discussion Paper has been changed. Specifically, the recommendations on both the nutrients and population group(s) to be addressed were regarded as both aspects of scope. Consequently, they more logically preceded the section on general principles for establishing the NRVs – given that the principles should be based on consideration of the nutrients and population group(s).

A. NUTRIENTS

1) VITAMINS AND MINERALS

9. Since the 26th Session of the CCNFSDU, the Committee had exchanged views on the scope of nutrients that should be included in the revision of current NRVs.
10. The delegation of EC repeatedly expressed the view that the current work for revision of NRVs should focus on vitamins and minerals, because there is an urgent need for the NRVs of vitamins and minerals in the *Codex Guidelines on Nutrition Labelling* to be updated and added.
11. The delegation of United States of America (USA) also proposed to focus the current work to vitamins and minerals and to limit the scope to those with science-based reference values for daily intake established by authoritative scientific bodies.

12. The EWG members responded to the March 2007 draft and universally agreed to focus on vitamins and minerals as a first phase. The reasons why the committee needs to focus on vitamins and minerals are summarised as follows;

- The essentiality of vitamin and minerals is well established;
- There is likely to be a greater body of evidence to define the recommendations for most vitamins and minerals than for other food components;
- The *Codex Guidelines for Use of Nutrition and Health Claims* indicates that nutrition claims should be limited to vitamins and minerals for which NRVs have been laid down in the *Codex Guidelines on Nutrition Labelling*;
- The *Codex Guidelines for Vitamin and Mineral Food Supplements* indicates that the labelling should include the amount of vitamins or minerals where appropriate in terms of the percentage of their NRVs.

2) PROTEIN

13. At its 26th Session, some delegations pointed out those NRVs were also needed for macronutrients noting that the current list included NRV for protein.³

14. Currently the *Codex Guidelines for Nutrition Labelling* includes NRV for protein in addition to those of vitamins and minerals. Also the *Codex Guidelines for Use of Nutrition and Health Claims* includes criteria for claims in relation to protein as well as vitamins and minerals. Therefore most EWG members supported that the Committee needs to consider how the NRV of protein will be updated as well.

15. However, several members suggested considering it as a future work, if this would require consideration of additional principles, which is specific for macronutrients.

3) Macronutrients associated with risk of non communicable disease

16. Most EWG members agreed that it might be appropriate to identify NRVs for certain macronutrients with risk of non-communicable disease.

17. However, for the following reasons, it was proposed by some members that the Committee should delay any attempts to identify NRVs for macronutrients other than protein and propose a separate new work of this area in the future:

- Based on existing Codex texts, it is not necessary to extend the NRVs to macronutrients other than protein.
- There is lack of sufficient scientific data to define the recommendations for macronutrients other than protein;
- It would necessitate developing new considerations and principles. For example, recommendations on carbohydrates and fats are expressed as a range of intake as a percentage of calories, with no consideration on the different specific physiological conditions and ages;
- Any new work to establish macronutrient NRVs associated with increased and decreased risk of non communicable diseases should be coordinated with the CCFL as part of both Committees' consideration of proposed actions for implementing the Global Strategy.

³ Para 41 of ALINORM 05/28/26

4) Other food components

18. None of the EWG members agreed on setting NRVs for other food components such as long chain fatty acids, lutein, choline, lycopene, and etc. These are not currently regarded as essential and available scientific evidence is unlikely to be adequate.

B. Population Group(s)

19. Currently there is only one set of NRVs for the general population (for children over the age of 3 and adults). The appeal of this approach is its simplicity and the fact that children over the age of 3-4 and adults generally eat the same product. It does, however, have drawbacks in the case of foods for infants and young children whose requirements are very different to those of adults.

20. Since the 26th Session of the CCNFSDU, the Committee has discussed whether several sets of NRVs should be established for different population groups. Several delegations proposed to distinguish between “infants and young children” and “adults”; other delegations proposed to define even more subgroups on the basis of age and gender. The Committee agreed that this question would require further consideration and that the EWG could prepare proposals on how to address this issue⁴.

1) One general group

21. Taking into consideration the complexity of the work, the delegation of USA proposed that the Committee limit the scope to update the general population NRVs in the *Codex Guidelines for Nutrition labeling* as a first phase. Perhaps after substantial progress has been made on NRVs for the general population, NRVs for other population groups such as “infants and young children” could be developed as a separate new work, if it would necessitate new considerations and principles.

22. It was also pointed that in defining the general population, the Committee will need to decide the age range for which these values are intended (e.g. 36 months and older or 48 months and older). The former range is supported by certain Codex texts defining “young children” as person age 12 to 36 months. The latter range is supported by some reference values for recommended intakes and/or upper levels of intake that have been established by authoritative scientific bodies⁵ categorizing the age range 1 through 3 years (i.e., 12 months up to 48 months).

23. The reference values for recommended intakes and/or upper levels of intake for this age group are frequently lower than for other age groups in the general population. Thus, if the 36 months and older range is selected, the Committee will need to consider the appropriateness of including the 1 through 3 year reference values in the establishment of general population NRVs.

2) Two groups for “adults” and “infants and young children”

24. At its 28th Session, the delegation of EC proposed to establish NRVs for “adults” and “infants and young children from 6 to 36 months.”⁶

25. Several EWG members showed agreement on that it is appropriate to have NRVs for foods intended to use specifically for the weaning period. The background information for this concept are as follows:

- Foods for infants and young children were very unlikely to be consumed by other population groups.
- The nutritional requirement of infants and young children is considerably different to those of

⁴ Para 43 of ALINORM 05/28/26

⁵ Human Vitamin and Mineral Requirements. Report of a Joint FAO/WHO Expert Consultation, 2002; and Dietary Reference Intakes Tables – The Complete Set. Institute of Medicine, National Academy of Sciences.

⁶ Para 138 of ALINORM 07/30/26

general population.

- *The Guidelines on Formulated Supplementary Foods for Older Infants and Young Children (CAC/GL 08-1991)* defines the term “older infants” as persons from the 6th month and not more than 12 months of age and the term “young children” as persons from the age of 12 months up to the age of three years (36 months).

26. For other foods, however, one set of NRVs would be appropriate. A proliferation of NRVs for a range of population groups is likely to create difficulties for consumers in terms of comparing different foods. It may also produce problems in terms of available label space especially for items sold in small packages or with multilingual labelling.

3) Three or more groups

27. Several EWG members were advocating the establishment of NRVs for ‘pregnant and lactating women’ in addition to the ‘general population’ and ‘infants and young children’, because these two groups have nutrient requirements that in many cases differ considerably to those of the general population.

28. There were some minor opinions to put emphasis on the establishment of NRVs for adolescent and/or elderly if there is enough information to generate reference values for these groups.

Recommendation

29. *The EWG suggests to the Committee to reach agreement on the scope of nutrients and population group(s) for the current work, before works proceed to the development of the principles for the establishment of NRVs.*

VI. DEVELOPMENT OF PRINCIPLES FOR ESTABLISHING NRVs

A. Considerations on the Choice of Reference Values

30. Any dietary reference value would suffice as a basis for product comparison, but setting NRVs becomes much more complex if those are to enable consumers to appraise the nutrient contribution of a food product in relation to their overall nutrient needs.

31. On the other hand, despite differences in nutrient requirements for different groups of the population, it is impractical to present multiple sets of reference values on a food label.

32. Therefore to produce a coherent and simple list of NRVs, the following important issues shall be considered:

- Selection of the basis of science-based reference value for daily intake
- Consideration of the different reference values for different groups in the population

1) Selection of the basis of science-based reference value for daily intake

33. There are two options for selecting the basis of the science-based reference values in relation to the nutrient requirement of a population:

- Option 1 (average requirements approach: ARs)
 - Select the values that meet the requirements of 50 percent of an apparently healthy population of a specific population group
 - Based on the criterion of adequacy it chosen

- Option 2 (recommended intakes approach: RDAs/PRIs⁷)
 - Select the values that meet the requirements of majority (97 to 98 percent) of an apparent healthy population of a specific population group
 - Generally based on the principle of the average requirement plus 2 Standard Deviations (SD) on the nutrient requirement distribution curve
34. In cases where there is an absence of values that meet the ARs or RDAs/PRIs of the population, it may be appropriate to consider the use of “acceptable range of intake”⁸ value for a nutrient. It is necessary to review how these values were derived on a case by case basis; some of “acceptable range of intake” values were established based on scientific evidence, others were based on median intakes of a nutrient provided there was no evidence of a deficiency.
35. Current NRVs have been established based on the RDAs/PRIs to cover the needs of as much of the population as possible. However one can argue that this could lead to an upward trend in the level of nutrients in foods due to the expected demands of the consumer for higher levels of nutrients as well as manufacturers’ efforts to enhance nutrient value.
36. By definition, ARs represent the most scientific estimate of nutrient requirement for individuals within a specific age and gender group and there are no demonstrable health benefits to nutrient intake levels in excess of ARs. Therefore, in view of the potential use of nutrition labelling, it might be acceptable to use this value for NRVs. However this approach created a set of values that was substantially different (lower) compared to the existing NRVs, which would lead to more confusion instead of giving a uniform and simple system. Therefore some would advocate continuing to use the basis of RDAs/PRIs for NRVs.

Recommendation

37. *If the Committee decides to establish NRVs for protein, new principles on how to derive this value can be added at this point.*

2) Consideration of the different reference values for different groups in the population

38. After the basis of the reference values for NRVs is selected, as either the average requirements or the recommended intakes, the differences of reference values for different groups in the population should be considered.
39. There are at least three options of selecting one value that can be used for labelling purposes, considering the differences of reference values for different groups in the population.
- Option 1 (population coverage approach)
 - Select the highest values from the different age-gender groups
 - Option 2 (population weighted approach)
 - Select the population-weighted reference values using census data for a country or region and proportions of each age-gender group

⁷ “RDAs/PRIs” is used as the generic term for the dietary reference values that have different terminology in different countries, for example recommended daily amounts, recommended daily allowances, recommended daily intakes, recommended dietary intakes, recommended nutrient intakes and population reference intakes

⁸ “Acceptable range of intakes” is used as a generic term to express the concept of the range, based on observations that individual consumptions within these limits appears satisfactory, in that neither deficiency nor signs of excess are seen. Different countries may use other terminology for this concept.

- Option 3 (median of adult male and female approach):
 - Select the values for both male and female adults equally into consideration.
40. Current NRVs have been established based on the highest RDAs/PRI of all different age and gender groups. For most nutrients, this has meant the RDAs/PRI of adult male, except for iron for which RDAs/PRI for adult women were selected.
41. With the selection of the highest values, the need of the vast majority of the population would be covered. However, arguments were that this approach would overestimate the actual needs of certain age and gender groups. In some cases, highest RDAs/PRI may raise safety issues for vulnerable subgroups of the population who do not require such high intakes. For example high intake of iron required by menstruating females is near or above the Tolerable Upper Intake Level (UL) of young children. This approach would also underestimate the nutritional value of the some traditional foods.
42. Alternatively, the population-weighted approach for all different age and gender groups in the population would be used, using census data. Being statistically most likely to accurately reflect any given individual's requirement, it would reduce the risk of excess, but also reduce the probability of a value underestimating personal requirement. It is noted that NRVs for pregnant and lactating women should be excluded from weighted values, as these are most likely to exceed the recommended maximum intakes of some groups in the population. However there is an argument that this approach will add complexity because NRVs have been set by making assumptions about both body weight factor and age factor. Also it is not practical particularly for countries with big population and wide area.
43. A weighted mean for both male and females would lead to a figure that is not significantly higher than the need of certain population groups but would still be approaching the required intake of a nutrient that would satisfy the needs of the majority of the population. Therefore some advocates using this approach as a basis for selecting NRVs.

Recommendation

44. *If the Committee decides to establish NRVs for other population groups, such as infant and young children, general principles can be added to address how these values will be derived at this point.*

B. Selection of a Suitable Reference Values to Extract NRVs

45. Once the Committee has reached agreement on choosing the most appropriate options for developing principles for establishment of NRVs, a next step would be the evaluation of the list of reference values and their scientific basis to extract overall NRVs by the principles agreed upon.
46. At the 25th Session, it was noted that the establishment of recommended daily intakes would require an expert consultation in order to consider available scientific evidence. However, the Committee could consider the update of NRVs for labelling purposes, as it would be the responsibility of regulators to establish such values.⁹
47. At the 26th Session, the Committee again discussed the possibility of asking for scientific advice from FAO and WHO in the revision of the current NRVs. Several delegations pointed out that considerable scientific evidence had been put forward so far and that international references were necessary in order to facilitate harmonization of nutrition labelling provisions among member countries.¹⁰
48. Therefore the Committee may come to decision to evaluate the existing lists and their scientific basis to extract overall NRVs without scientific advice from expert consultation.

⁹ Para 54, ALINORM 04/27/26

¹⁰ Para 37, ALINORM 05/28/26

49. Several EWG members noted that where relevant advice has been provided by FAO/WHO, this should be taken into consideration in establishing NRVs. The FAO/WHO 1998 Bangkok Expert Consultation reviewed the recommended intakes to meet the requirements of the majority of an apparent healthy population for certain vitamins and minerals. This expert consultation did not include the trace elements. It may be necessary to review the FAO/WHO recommendations in the light of reviews by other authoritative bodies that have been published since the FAO/WHO consultation.
50. Most of EWG members agreed that recent reference values from authoritative scientific bodies other than FAO/WHO could be used as a basis for deriving NRVs.
51. A member suggested that in developing tables that list science-based reference values for daily intakes that are applicable to the NRV population group(s), the following criteria shall be used to select suitable sources for these values:
 - The sources should reflect independent review of the science by authoritative scientific bodies;
 - Higher priority may be given, as appropriate, to more recent reference from authoritative scientific bodies

C. Governments' Selection of NRVs

52. A government may select to use the Codex NRVs, or alternatively, establish other reference values for labelling purposes that take into account additional factors specific to a country or region. For example, at the national level, values for the general population may be based on population-based averages of science-based reference values for daily intakes of the different age-gender groups. In addition, the bioavailability of food sources for a nutrient such as iron in a country may influence recommended intakes of that nutrient and consequently, a country's food label reference values.

VI. REFERENCES

1. FAO/WHO/Ministry of Trade and Industry, Finland (1988). Recommended nutrient reference values for food labelling purposes. Report of a Joint FAO/WHO Expert Consultation on recommended allowances of nutrients for food labelling purposes. Helsinki, Finland, 12-16 September 1988
2. WHO/FAO (2002). Human vitamin and mineral requirements. Report of a Joint FAO/WHO Expert Consultation, Bangkok, Thailand. FAO Rome. <http://www.fao.org/docrep/004/y2809e00.htm>
3. Codex guidelines on nutrition labelling CAC/GL 2-1985 (Rev. 1-1993). <http://www.fao.org/docrep/005/y2770e06.htm>
4. Codex guidelines for vitamin and mineral food supplements CAC/GL 55-2005
5. IOM (Institute of Medicine) (2003) Dietary Reference Intakes, Guiding Principles for Nutrition Labeling and Fortification. The National Academies Press, Washington DC
6. SCF (Scientific Committee for Food) (1992). Nutrient and energy intakes for the European Community. Opinion adopted by the Scientific Committee on Food on 12 December 1992. Reports of the Scientific Committee for Food, Thirty-First Series. European Commission, Luxembourg.
<http://europa.eu.int/comm/food/fs/sc/scf/out89.pdf>
7. SCF (Scientific Committee on Food) (2003) Opinion of the Scientific Committee on Food on the revision of reference values for nutrition labelling, 5 March 2003. European Commission, Belgium.
http://europa.eu.int/comm/food/fs/sc/scf/index_en.html
8. COMA (Committee on Medical Aspects of Food Policy) (1991). Department of Health. Dietary

Reference Values for Food Energy and Nutrients for the United Kingdom. Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy. London: HMSO (Report on Health and Social Subjects; 41)

9. Allison A. Yates (2006). Establishing new principles for nutrient reference values (NRVs) for food labelling purposes. *Nutr Research and Practice* 2:89
10. Valerie Tarasuk (2006). Use of population-weighted estimated average requirements as a basis for daily values on food labels, *Am J Clin Nutr* 83(suppl):1217S
11. George H Beaton (2006). When is an individual and individual versus a member of a group? An issue in the application of dietary reference intakes, *Nutr Rev* 64(5):211
12. Murphy S, Barr SI (2006). Recommended Dietary Allowances should be used to set Daily Values for nutrition labelling. *Am J Clin Nutr* 83:1215S
13. Hathcock J(2006). Guiding Principles for Nutrition Labelling: New IOM Report Misses the Mark. Council for Responsible Nutrition Backgrounder. December 2003.

http://www.crnusa.org/pdfs/CRN_Bckgrndr_IOM_DVs1203.pdf

Appendix

Draft General Principles for Establishing Nutrient Reference Values in the *Codex Guidelines for Nutrition Labelling*

(For consideration by the CCFNSDU)

A. Purposes

The main purposes of Nutrient Reference Values (NRVs) are to help consumers compare the nutrient content of different food products and estimate the usefulness of a food product in terms of its percentage contribution to the overall healthful diets. The establishment of Codex NRVs for labelling purposes is intended to facilitate the goals of protecting consumers' health and ensuring fair practices in food trade

B. Scope

The proposed framework for the development of principles for establishing NRVs may fit well to vitamins and minerals for general population. The Committee, however, may consider other nutrients and different population groups by adding new principles into the existing one.

C. Development of Principles for Establishing NRVs

a. Considerations on the choice of reference values for nutrient requirement

1. To produce a coherent and simple list of NRVs, the following important issues shall be considered:
 - Selection of the basis of science-based reference value for daily intake
 - Consideration of the different reference values for different groups in the population
2. The NRVs shall be based on one of the following type of science-based reference value for daily intake:
 - Option 1: Values that meet the requirements of 50 percent of an apparently healthy population of a specific population group
 - Option 2: Values that meet the requirements of majority (97 to 98 percent) of an apparent healthy population of a specific population group
3. The NRVs for the general population aged [36 m or 48m] and older shall be established, taking the following considerations into account:
 - Option 1: Selection of the highest values from the different age-gender groups
 - Option 2: Selection of the population-weighted reference values using census data for a country or region and proportions of each age-gender group
 - Option 3: Selection of the values for both male and female adults equally into consideration.

Note. If the Committee decides to establish NRVs for other population groups such as infants and young children, general principles would need to be added to address how these values will be derived.

b. Selection of suitable reference values to extract NRVs

1. Where relevant advice has been provided by FAO/WHO, this should be taken into consideration in establishing NRVs. If the FAO/WHO resources are not available, recent reference values from authoritative scientific bodies other than FAO/WHO could be used as a basis.

2. In evaluating the existing list of science-based reference values for daily intakes that are applicable to the NRV population group(s), the following criteria shall be used to select suitable sources for these values:
- The sources should reflect independent review of the science by authoritative scientific bodies;
 - Higher priority may be given, as appropriate, to more recent reference from authoritative scientific bodies

c. Governments' selection of NRVs

A government may select to use the Codex NRVs, or alternatively, establish other reference values for labelling purposes that take into account additional factors specific to a country or region.