From: broenstrup@dge.de
Sent: Friday, 14 June 2002 15:25
To: dietandhealth@who.int
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Subject: WHO/FAO draft report on Diet, nutrition and the prevention of chronic diseases

Dear Sir or Madam,
enclosed please find the comments of the German Nutrition Society regarding the WHO/FAO draft report on Diet, nutrition and the prevention of chronic diseases. We already commented on an earlier version of the draft report (email to nishidac@who.int on April 25, 2002); however, these are our updated and most complete comments.

As requested in the instructions on your website, we would like to mention the following details about our organization:

The German Nutrition Society (Deutsche Gesellschaft für Ernährung e. V. / DGE) is a non-profit making organization and obliged to scientific facts.
Our aims are:

1. to support the nutritional scientific research, to collect and to evaluate the results of related disciplines, to publish them in a documentation and to identify areas with requirement for nutritional research.

2. the coordination and assurance of quality of the nutrition education in the Federal Republic of Germany. Based on scientific facts about wholesome nutrition, the DGE helps to promote and maintain the health and fitness of the German population.

The DGE is an official, registered association. In persuance of our aims we are not influenced by any economic or political interests. The German Nutrition Society has close to 4000 members. The main office is in Bonn, with additional locations in 11 of the 16 states of Germany. We are funded by the Federal government and the government of the 11 states and generate own resources through e.g. the publication of brochures, books etc. and through our activities with regard to further nutrition education.

Once again we would like to thank WHO/FAO for enabling the German Nutrition Society to comment on this important piece of work.

Kind regards,
Anja Brönstrup

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Comments on the draft report on *Diet, nutrition and the prevention of chronic diseases* of the Joint WHO/FAO expert consultation, 28 January – 1 February 2002, Geneva, Switzerland

14 June 2002

Dear Sir or Madam,

the German Nutrition Society welcomes the opportunity to comment on the above-mentioned draft version of the report.
We would primarily like to address the following issues:

- **Ranges of population nutrient intake goals (Table 2, page 21):**

1) Range of fat intake
   As this report addresses issues related to prevention of chronic diseases, for many of which an *excessive* fat intake plays a major role, it may be more prudent to only specify an upper limit of fat intake (i.e., ≤ 30% energy). In addition, we wonder whether a fat intake of only 15% of total energy will result in a sufficient intake of fat-soluble vitamins.

2) Range of intake of free sugars
   We noticed that the proposed value of < 10% of energy is different to a guideline for sugar intake in an earlier WHO/FAO report. In the 1996 report of a joint FAO/WHO consultation in Nicosia, Cyprus regarding the preparation and use of food-based dietary guidelines, “no specific limit for sugar consumption is proposed, since the putative relationship of sugar consumption to obesity is offset by the inverse relationship observed between sugar and fat intake” (page 62). Instead, it is stated that “sugar intake plays a minor role in caries prevention where fluoridation and hygienic measures have been taken” and “moderate intakes of sugar are therefore compatible with a varied and nutritious diet”. The discrepancy between this and the earlier report is even more noticeable, as the Nicosia report and the current one had similar targets, i.e. to review the scientific evidence and epidemiology of diet-related health problems, including

noncommunicable diseases. Thus, we wonder whether this apparently

contradicting guidelines could be harmonised or, if this is not possible, what the "official" recommendation by WHO/FAO may be regarding this issue.

- **Nutrient recommendations for the prevention of osteoporosis (pages 42-44 and Annex 7)**

In the WHO/FAO report, it is suggested that, in populations at risk of osteoporotic fractures, the risk may be increased when the calcium intake is below 400-500 mg/day (Annex 4, page 11). Bone fractures must be considered a severe clinical outcome of the disease osteoporosis. White subjects are primarily affected. Taken together, the data indicate that a calcium intake of white subjects below 400 – 500 mg/day represents a frank nutrient deficiency. It must be regarded an impressive result that observational studies are able to recognize a low calcium intake as a single risk factor of osteoporosis. Moreover, it is to mention that several different stages of nutrient supply between "deficiency" and "sufficiency" do occur such as a "suboptimal" and "insufficient/subclinical" supply. An insufficient supply can already lead to functional alterations of a target tissue for that specific nutrient. In the case of calcium, the risk of osteoporotic fractures may be enhanced. Due to the multi-factorial origin of osteoporosis in elderly white subjects, an insufficient calcium supply may not be observed as a statistically significant increase of osteoporotic fractures on a population level. However, even in subjects with a habitual calcium intake of 700 mg/day a calcium supplement of 1,000 mg/day alone is able to reduce osteoporotic fracture risk (4).

In general, it would be more appropriate to give different recommendations for the daily calcium intake of white populations and of non-white populations with traditional life style. Several nutrition societies of western countries have explained why the daily calcium intake of adolescents and adults should be in the range of 1,000 to 1,300 mg/day (1, 2, 3).

We can not follow the argumentation that the recommendation for a higher calcium intake should be restricted to subgroups with a high risk of osteoporosis and that a higher calcium intake should be achieved by use of calcium supplements. Calcium and vitamin D are nutrients and not pharmaceuticals. This means that these substances have to be ingested regularly (or must be synthesized regularly in the skin in the case of vitamin D) to avoid disturbances of body functions related to these nutrients. Thus, a recommendation for calcium and vitamin D must include the entire healthy population. This does not necessarily mean that a supplement has to be given. For white lactose tolerant subjects it is possible to ingest 1,000 mg calcium/day with regular foods if dairy foods are included.

A combination of calcium supplements with other preventive measures such as estrogens (5), exercise (6), or vitamin D (7) is more effective in elderly subjects in enhancing bone mineral density than each measure alone. In line with the multi-factorial origin of osteoporosis, prevention is obviously most effective if it is based on different measures including a calcium intake > 1,000 mg/day.

We do not understand the conclusion that vitamin D intake should be in the range of 5-10 µg/day. All studies on calcium and vitamin D supplements have used vitamin D doses between 10 and 20 µg. A vitamin D recommendation of only 5 µg/day for elderly subjects is not justified by present evidence.

References

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- **Further questions, suggestions or comments are:**

Page 11, line 26: "… 22 g/cu/d …"
We assume that cu means per caput, but as this is not a commonly used abbreviation, we suggest to write this out.

Page 15, line 14: "… cholesterol, high blood pressure, and alcohol."
To avoid the impression that cholesterol per se is a risk factor, specify that *hypercholesterolaemia* is meant. Similarly, *alcohol consumption* may be more appropriate than alcohol alone.

Page 17, line 8: "… obesity and lipidaemia …"
See above, *hyperlipidaemia* may be more correct.

Page 23, line 3: "For individuals: 18.5 – 24.9 kg/m^2 and avoid weight gain during adult life (> 5 kg)"
With regard to weight gain in adulthood, is there a scientific basis for the fact that a weight gain of more than 5 kg is associated with an unfavourable outcome, provided the resulting BMI after weight gain is still < 25? For example, for a height of 180 cm, a weight of 60 - 78 kg results in BMI values of 18.5 – 24. Thus, theoretically, starting from a body weight of 60 kg, a weight gain of 18 kg would still result in a BMI within the normal range.

Page 25, line 24: "To achieve the optimum population (adults) median BMI of 21 kg/m^2"
Presumably, *median* should be substituted by *mean* (see page 23).

Page 25, line 25: "For individuals, to maintain the BMI ranges of 18.5 – 25 kg/m^2"
To be in line with table 4, the upper BMI limit should be 24.9 instead of 25.0.

Page 25, line 29: "… is shown in Table 3."
Replace with *Table 4*.

Page 32, table 6 and page 31, line 30: "While vitamin E intake appears to have no relationship, for myristic and palmitic acids, …, there appears to be convincing evidence for an increase in risk."
From this chapter and from annex 4 (page 20), it is unclear why the evidence for myristic and palmitic acids is judged as *convincing*, whereas for lauric acid the evidence is only rated as *possible*.

Page 31, line 36: "There is a probable increase in risk from dietary cholesterol, unfiltered boiled coffee, and beta-carotene supplements."
Even though we do not favour the intake of nutritional supplements or an untargeted fortification of foods, we would like to state that it is more correct to speak of *high doses of supplemental beta-carotene*, as supplementation of beta-carotene is not per se linked to a certain health risk.

Page 36, line 22: Maintain weight (among adults) in the range of BMI 18.5 to 25 kg/m^2, …"
To be in line with table 4, the upper BMI limit should be 24.9 instead of 25.0.

Kind regards
GERMAN NUTRITION SOCIETY (DGE e.V.)

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