12 June 2002

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World Health Organization
CH 1211 Geneva 27
SWITZERLAND

Dear Dr Puska

Thank you for providing the Australian Food and Grocery Council with opportunity to comment on the draft WHO/FAO technical report, "Diet, Nutrition and the Prevention of Chronic Diseases".

The AFGC is the peak national organisation representing Australia's processed food, drink and grocery products industry. The industry has an annual turnover in excess of $54 billion and employs 165,000 people - almost one in five of the nation's manufacturing workforce. The membership of the AFGC comprises more than 185 companies, subsidiaries and associates which constitutes in the order of 80 per cent of the gross dollar value of the highly processed food, beverage and grocery products sectors

The AFGC accepts the need to consult widely on this report, the purpose of which is to draw conclusions and make judgments based on the best available evidence drawn from sound science and supportable hypotheses.

As a matter of principle, the AFGC supports sound science based recommendations for the supply of safe food to global food markets and supports evidence based recommendations on food and nutrition policy. Where strategies for action are untested, the AFGC supports appropriate "testing" of such strategies for effectiveness. Where strategies have been tried and shown to be ineffective, the AFGC considers further consideration of such strategies to be wasteful of resources and inappropriate for inclusion in a science based technical report that includes global policy recommendations.

The AFGC looks forward to receiving the revised report in due course and stands ready to assist in your deliberations. Please contact me if you

require any clarifications concerning our submission.

Yours sincerely

HARRIS BOULTON
A/g Chief Executive
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SUBMISSION

JOINT WHO/FAO EXPERT CONSULTATION ON DIET, NUTRITION AND THE PREVENTION OF CHRONIC DISEASES

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Scope of Activities:	The AFGC represents Australia's largest manufacturing sector. Membership comprises more than 185 companies, subsidiaries and associates, which constitutes in the order of 80 per cent of the gross dollar value of Australia's highly processed food, beverage and grocery products sectors. Activities include: ***Scientific and Technical***: Food Regulations, Nutrition and Health, Food Safety, New Technologies. ***Economic Policy:*** Micro/macro, Economic Reform, International Trade, Industrial Relations, Taxation. ***Policy:*** Regulatory Policy, Environment, Product Tampering, Supply Chain. ***Public Affairs:*** Consumer Affairs, Communication, Public Relations.
Mission of Organisation:	To represent the Australian packaged food, drink and grocery products industry in national and international forums.
Interest in the Subject Matter:	The AFGC is the peak national organisation representing Australia's packaged food, drink and grocery products industry.
Source of Funding:	The AFGC is funded solely from member subscriptions.

INTRODUCTION

The Australian Food and Grocery Council (AFGC) shares with WHO/FAO their concerns that overweight and obesity is a truly global epidemic that requires action. The AFGC is concerned that the focus is solely on dietary intervention when the problem is multifactorial and requires equal attention be given to physical fitness when energy imbalance is being discussed. The AFGC considers appropriate the commissioning, under the auspices of the WHO/FAO, of an expert report that addresses those concerns in the context of diet, nutrition, **physical fitness** and the prevention of chronic disease.

However, the AFGC considers that the use of a consensus report and expert panel review is not in keeping with modern scientific inquiry methods that use sound science as evidence, evaluated in a systematic way. The NHMRC, within Australia, has removed "expert opinion and consensus review" from its guidelines on levels of evidence.

The AFGC considers that setting of public health policy demands critical appraisal and systematic review of all the available science.

This is expressed well in Annex 5 (p. 13) which states, "*Thus the best conclusions will be based on careful and critical evaluation of all forms of evidence",* and (p. 16) *"Public health policy with respect to nutrition and cancer should be based on the best available scientific research".*

The AFGC considers that the Annexes which underpin the recommendations on population nutrient goals and the recommended action and integrated strategies for action would be based soundly in science **if they had used a process of systematic review** (Cochrane http://www.cochrane.org/ accessed 7 June 2002). Systematic review lists included and excluded studies, and uses modern methodology that permits assignment of a population attributable risk (from epidemiological studies) for particular environmental factors (see report on type 2 diabetes costs in Australia, the potential impact of changes in diet, physical activity and levels of obesity http://www.sph.uq.edu.au/nutrition/monitoring/P13.htm accessed 7 June 2002).

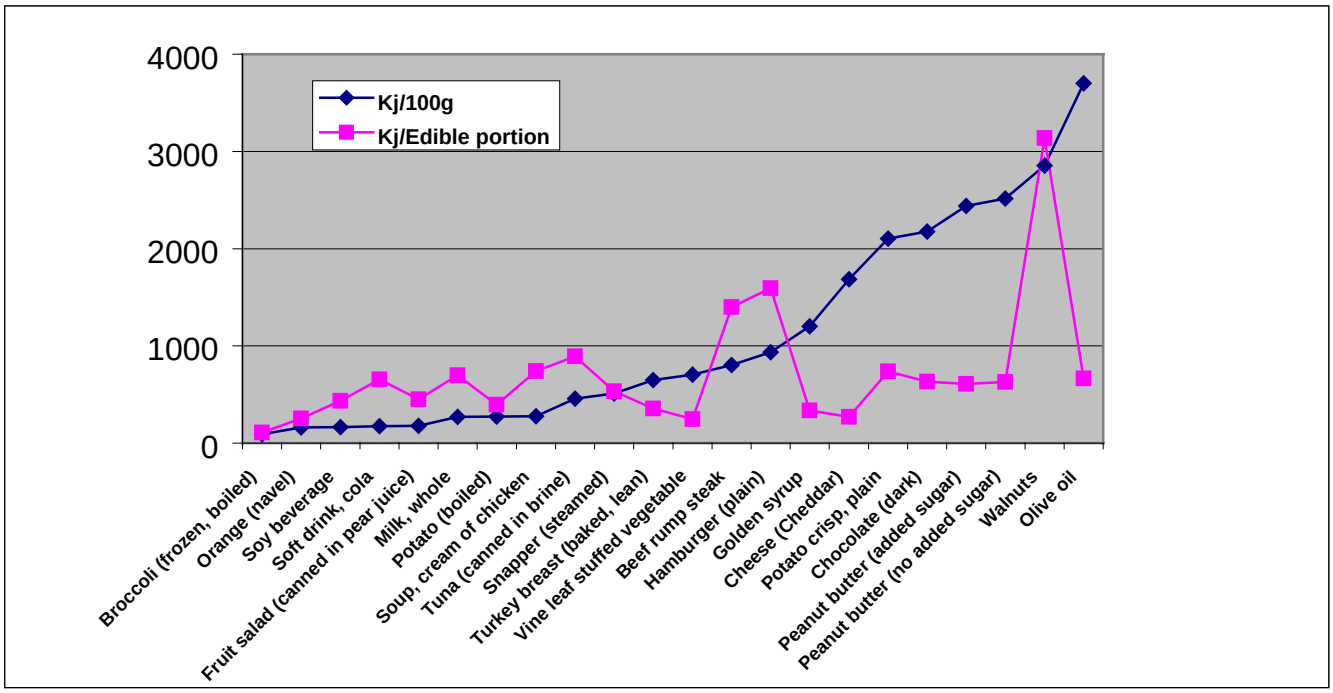
The mixing of science and opinion in the summary of the strength of evidence relating environment to diet related disease (Annex 1) is therefore particularly concerning given the above. It can only be assumed this occurred as a result of the haste with which this report was prepared.

The AFGC considers further work is needed before the report is accepted due to contradictions within and between annexes and between annexes and the expert report (see below).

DEFINITIONAL ISSUES

The AFGC considers there is no clear definition of energy density with respect to food. High fat and/or high sugar foods are spoken of as energy dense foods. Table 1 of Annex 2 (p. 36) defines energy dense foods as "*high in fat and/or sugar, energy dilute foods are high in fibre and water, such as fruit, legumes, vegetables & whole grain cereals".* In Table 3 of section 4.1 (p. 26 main report), the definition is refined "*high in fat and/or sugar, **low energy dense** (energy dilute) foods are high in fibre and water, such as fruit, legumes, vegetables & whole grain cereals **as well as lean meat and fish***". Lean meat and fish are not high in fibre and water. Another definition is offered in Annex 5 (p. 13) *"high energy content relative to volume or weight of food"*. A definition referring to the diet and not foods occurs on p. 28 of the report *"the fat and free sugars targets are indicators of the energy density of the diet"* (see comment later).

A cursory look at any national database of foods will demonstrate the difficulty of such definitions (Figure 1 – Data from Food Composition Tables for use in Australia 1995).



Energy dense foods are high in fat but generally not sugar (data not shown), a not unexpected finding given that fat has over twice the Kj per gram than sugar. Lean rump steak and a hamburger have similar (mid-range) energy density, while walnuts and olive oil are high energy density and carbonated soft drink low energy density. In these examples, energy per serve across foods is generally a straight line, with the exception of steak, hamburger and walnuts.

If what is meant is high energy dense, nutrient poor foods, then this should be defined (poor in micronutrients, other macro nutrients, etc). Annex 3 (p. 13) offers a definition of nutrient dense taken from a 1985 WHO report (technical report series 724), *" foods which are low in energy per unit volume, yet are high in micronutrients and dietary fibre"*. If the intent is to discuss energy density of diets rather than foods, then this should be explicitly stated, since the energy objective for an individual is to deliver their energy requirement through the whole diet and not through individual foods.

The AFGC considers health policy recommendations should not be based on ill-defined concepts.

CONTRADICTIONS BETWEEN THE REPORT AND THE ANNEXES AND CONTRADICTIONS WITHIN ANNEXES

Annex 2: Excess weight gain and obesity

1. The author quite correctly states (p. 3) that, "*In the current review, randomised control trials were given the highest ranking with consistent results from several trials constituting 'convincing' evidence*". He goes on to state, "*For environmental factors, more associated evidence and expert opinion had to prevail because of the absence of direct studies or trials in the area*". **This important distinction is not reflected in the summary presented in Annex 1, nor in the main report** (Table 3 p. 26) where **this low level**

evidence is accorded the same status as that derived from criteria (p. 23) used for more substantive evidence.

Using the criteria established (main report p. 23) would place all environmental factors in the "insufficient evidence" category.

The AFGC considers health policy recommendations should not be based on inappropriate use of levels of evidence.

2. The targeting of high fat foods as the cause of overweight and obesity and the resultant placement of high intake of energy dense foods in the "convincing" category (Table 1, p. 36, Annex 2) is based on evidence from short term studies using covert manipulation of the composition of weight reducing diets. It is at odds with the reference (Willett, WC, AJCN 1998, 67 556S-562S) quoted in Annex 5 (p.13) and the conclusion in Annex 5 which states, "*However, evidence based on long term studies for these effects of dietary composition is inadequate at present*" and "*Thus at this time the appropriate emphasis for weight control appears to be limitation of excessive energy intake from any source and the adoption of adequate daily physical activity*".

It is also at odds with the (unreferenced) comment in Annex 4 (p. 25), "*It seems more likely that the epidemic of obesity now sweeping the world is due to a reduction in activity and a general increase in food intake from both carbohydrates and fats. Large scale introduction of low-fat foods in the US has done nothing to stem the obesity epidemic…efforts are better concentrated on improving opportunities for physical activity and decreasing total caloric intake*".

The use of a systematic review process by the authors of the Annexes would have permitted listing of excluded as well as included studies, so a judgment could have been made as to the veracity of the statement in Annex 4 and why the Willett reference was not considered relevant in Annex 2.

3. The author quite correctly states (p. 3) that, "*Physical activity is at least as important as energy intake in the genesis of weight gain….*" and draws attention to the IARC review of weight control and physical activity (IARC, Vol. 6, 2002) indicating its use as the basis for "*recommendations on physical activity*". The recommendation within the IARC review is derived from different levels of evidence base from that proposed in this report. The recommendation to stay healthy (p. 82) is "*60 minutes of light to moderate effort daily*" and this is taken from "Handbook for Physical Activity Guide to Healthy Active Living" published by the Canadian Society for Exercise Physiology.

The AFGC considers it is not sufficient to assume that a full systematic review of the evidence for the role of physical activity in health maintenance was undertaken in developing those guidelines. In any event, the recommendation is changed (main report, p. 27) to "*a total of one hour per day on most days of the week of moderate intensity, such as walking, is necessary to maintain a healthy weight, particularly for people with sedentary occupations*" Despite this change, the reference is still to the IARC report.

The recommendation is also not in line with other evidence based reports (http://www.health.gov.au/pubhlth/strateg/active/who.htm accessed 11 June 2002) which recommend 30 minutes of moderate-intensity, physical activity on most or all days of the week, to gain a health benefit.

4. The inclusion of a quantitative target for free sugars in Table 3 (p. 41) and repeated in the main report (section 4.1, p. 28) does not reflect the evidence in Annex 2 which states (p. 13), "*Overall, the mixed results, especially amongst the few available trials, does not allow judgement to be made about the sugar content of food and obesity*".

However, the justification for the inclusion of free sugars appears to be a reference (86, p. 11) suggesting that reduced fat products have had added back large amounts of sugars such that (p. 11) "*they contain about the same amount* ***of energy per 100g*** *as their high fat counterparts*". This is not possible given the energy concentration of fat vs sugar (37kj/g vs 16kj/g). Any food in which sugar is substituted for fat will have lower energy per 100g, even assuming similar rheological properties and consumer acceptability could be maintained at extreme levels of substitution.

5. Research which has differentiated fitness from fatness has been overlooked. There is sound science that underpins the strong public health benefits of fitness, despite fatness (as measured by BMI). A cohort study demonstrated a stepwise significantly higher relative risk of death in unfit vs fit men with BMI >= 30 (Myers et al., 2002). Other studies have reported similar findings for cardiovascular disease and diabetes (Lee, et al., 1999; Wei, et al., 1999).

ANNEX 3: TYPE 2 DIABETES

The AFGC considers that the evidence concerning lifestyle factors and the risk of developing type 2 diabetes should be based on studies undertaken in those with type 2 diabetes.

Evidence that improved glucose tolerance and reduced incidence of diabetes results from increased physical activity has been effectively demonstrated (Knowler et al., 2002; Tuomilehto et al., 2001).

Page 15 states, " *active individuals who are not overweight may derive up to 35% of their energy from fat, so long as saturated fats do not exceed 10% of energy intake. Adults who live a sedentary lifestyle should preferably restrict their fat intake to less than 30% of energy intake*".

Page 16 (and repeated in Table 2, p. 27) states, "*in line with the current recommendations for the prevention of cardiovascular diseases (in this report) the recommendation for total dietary fat is a maximum of 35% and saturated fat should not exceed 7% of total energy intake*".

Main report (p. 30) states, "*saturated fat intake should not exceed 7% of total energy intake; total fat intake should not exceed 30% of total energy intake*".

The AFGC considers that health policy recommendations should not be based on contradictory evidence.

ANNEX 4: CARDIOVASCULAR DISEASES

The recommendation (p. 68) to restrict saturated fats to less than 7E% does not seem to be based on the evidence presented. The data support 10E% (p57).

The recommendation to restrict salt intake to 1.7g/day has been made without considering several studies (Graudal, et al., 1998; Midgley, et al., 1996) that differ in outcomes from those quoted (ref. 2, 3, 8, 10 p. 43) in Annex 4. There is also no reference to the UK longitudinal study (Singhal, et al., 2001), which produced different results from the Dutch study quoted (ref. 13, 14, 17 p. 44).

The AFGC considers that the use of a systematic review process by the authors of the Annex would have permitted a judgment as to why these were excluded.

ANNEX 5: CANCER

The author quotes (p. 7) a "*systematic review concluded that preserved meat is associated with increased risk of colorectal cancer but that* ***fresh meat is not***". The author continues, "*Overall the evidence is not conclusive but suggests high consumption of preserved* ***and red meat*** *probably increases the risk for colorectal cancer*". The inclusion of red meat is inconsistent with the results of the systematic review quoted and not in line with the criteria for "Probable" indicated (p. 23) in the main report. The statement concerning red meat is repeated under Recommendations (Annex 5 p. 16) and the main report (p. 37) despite **(correctly) not appearing in Table 7** (Main report p. 36) as "probably contributing to increased risk"; and **(correctly) not appearing in the table in Annex 1,** which summarises strength of evidence.

The AFGC considers that health policy recommendations should not be based on incorrect evidence.

ANNEX 6: DENTAL DISEASES

This is the weakest of the Annexes, providing very thin coverage of the available literature. Many studies in the scientific literature found no statistically significant correlation between amount or frequency of sugar consumption and caries (reviewed by Pollard, et al., 1996). Associated evidence from experimental studies is not included (Hussein, et al., 1996; Curzon and Hefferen, 2001). The statistical treatment of cross-sectional studies to demonstrate that amounts and frequency of sugar intake are both risk factors is flawed.

Frequency of consumption of fermentable carbohydrates is a primary risk factor for dental caries, not the amount consumed (König, 2000). Not quoted are studies showing that all fermentable carbohydrates have cariogenic potential (Imfeld, 1983; Lingström, 2000; Pollard, et al., 1993; Van Loveren, 2000). Other omissions include studies that report dental hygiene, and reduction of the frequency of eating as effective public health approaches to preventing dental caries (Miyazaki, 1996; Van Loveren and Duggal, 2001; Van Loveren, 2000; Einarsdottir and Brathall, 1996; Gibson and Williams, 1999; Duggal, et al., 2001).

The AFGC considers that the use of a systematic review process by the authors of this Annex would have permitted a judgment as to why these were excluded.

ANNEX 1: SUMMARY OF EVIDENCE TABLE

The AFGC considers that given the deficiencies in the Annexes as noted above, this Table requires complete revision **to reflect evidence based science** and to remove the confusion caused by the use of different levels of evidence for certain factors.

Specifically, eliminate:

- high intake of energy dense foods;
- high intake of soft drinks;
- reference to free sugars;
- the other factors section; and
- the environmental variables section.

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