14 February 2006

Response to the EC Green Paper: Promoting healthy diets and physical activity: a European dimension for the prevention of overweight, obesity and chronic diseases.

Organisation:
Weight Concern and University College London (Department of Epidemiology and Public Health, Health Behaviour Unit), UK.

Contributors:
Nilani Sritharan (Research Nutritionist, Weight Concern), Jane Wardle (Professor of the Health Behaviour Unit, UCL), Lucy Cooke (Research Fellow, UCL).

Weight Concern is a registered charity which was set up by Jane Wardle and others in 1997 to tackle the rising problem of obesity in the United Kingdom. The charity is committed to researching and developing more effective treatments for childhood and adult obesity and providing education and training for health professionals in the management of overweight and obesity.

The charity has a leading reputation in the field of obesity and overweight and is staffed by clinical psychologists, clinical and research dietitians and behavioural experts.

Weight Concern runs training programmes in cognitive behavioural techniques for health professionals working with people who are overweight. Weight Concern has developed self-help programmes, self-help support groups and family-based childhood obesity treatments which are already being implemented successfully in a number of Primary Care Trusts across the country.

We welcome the European Commission's invitation to comment on the green paper and enclose our response to the requested questions below.

1. **Which kind of Community or national measures could contribute towards improving the attractiveness, availability, accessibility and affordability of fruits and vegetables?**

   There are a number of ways in which children can be encouraged to increase their preference for fruits and vegetables. What is clear from the evidence is that education alone is insufficient to alter eating behaviours and preferences. Practical parenting solutions, supportive policies and positive environments are also needed.

   1.1. ***Free fruit in schools***

   1.1.1. The Community may be able to improve consumption of fruits and vegetables by offering grants for schools to offer free or subsidised fruit to infants and junior school children.

   1.1.2. The National School Fruit Scheme offered free school fruit to children in nursery schools across England as part of a pilot study. Researchers showed that intakes increased by almost double (117g vs. 67g) in children offered the free fruit compared to those that were not. This is likely to have clinically significant benefits as increasing fruit and vegetable intakes by half a portion (40g) is associated with an 8% reduction in cancer in adults (WCRF 1997).

1.1.3. However, follow-up work suggests that these effects may be short-term; increases in fruit and vegetable intakes returned to similar non-free fruit levels (83g vs. 86g) when the scheme was withdrawn (Wells and Nelson 2005). One option to overcome this might be to initially offer free fruit and to then provide a subsidised fruit scheme for subsequent years. This concept was successfully tested in a Norwegian study (Bere et al 2005; Veierod & Klepp 2005). Increases in fruit consumption following the provision of free fruit were sustained a year on when a subsidised fruit scheme was then introduced.

1.2. Influencing children's preference for fruit and vegetables

1.2.1. Increased exposure

1.2.1.1. The Community could also improve fruit and vegetable intakes by increasing parental awareness about and knowledge of practical techniques to increase their child's food preferences. These insights could be communicated through health professionals (particularly health visitors) in each member state.

1.2.1.2. There is now good evidence to suggest that increasing a child's exposure to fruits and vegetables can improve their liking and hence, intakes of these foods. Studies show that parents typically offer a child a new food 3-5 times before assuming the child does not like it (Carruth et al 2004; Carruth and Skinner 2000, Skinner et al 2002). In contrast, evidence shows that it may take between 10-15 exposures to effect any change in food preferences. The need for multiple exposures to a new food has been shown in infants (Birch et al. 1998; Gerrish & Mennella 2001; Sullivan & Birch 1994), pre-schoolers (Birch et al. 1987; Birch & Marlin 1982; Sullivan & Birch 1990) and school-aged children (Loewen & Pliner 1999; Pliner & Stallberg-White 2000).

1.2.1.3. In the school environment, intakes of fruit and vegetables have been shown to decline with the availability of school snack bars over and above the provision of school meals at lunchtime. Careful consideration is needed over the availability and variety of options of less healthy foods in the school environment and the financial drivers of decisions to offer these.

1.2.2. *Setting an example*

1.2.2.1. Parents have the capacity to influence their children's acceptance of certain foods. Behaviour modelling studies in young children have shown that the child is more likely to taste a food which their parents have eaten than one which they have observed being eaten by a stranger (Harper & Sanders 1975). This has been demonstrated in children of parents with a liking for chilli, a flavour which would ordinarily be aversive to humans but which the child may develop a tolerance of, and has been shown for fruit, vegetable and juice consumption (Cullen et al. 2000b; Cullen et al. 2001). Our researchers found that in the British, parental consumption is the strongest predictor of children's fruit and vegetable intakes (Cooke et al. 2004).

1.2.2.2. At UCL, we have demonstrated successful outcomes following initiatives to teach parents practical techniques to improve their children's fruit and vegetable intakes. With funding, it would be possible to incorporate these techniques into health professionals' training and into regional health promotion centres across member states. We would be happy to assist in the development of such schemes should the EC deem it appropriate to finance.

1.2.3. *Parenting techniques*

1.2.3.1. Use of rewards to encourage children to eat fruit and vegetables can have the reverse effect to the desired one. Parents should be discouraged from using such

incentives as it may actually lower a child's liking for certain foods (Newman & Taylor 1992).

2. **On which areas related to nutrition, physical activity, the development of tools for the analysis of related disorders, and consumer behaviour is more research needed?**

2.1.*Measurement and assessment*

2.1.1. There is a clear need to develop more accurate but practical assessment tools for the purposes of recording food intakes, physical activity and levels of fitness and measuring BMI in large-scale studies (rather than relying on self-reported BMI).

2.2.*Consumer behaviour*

2.2.1. We would like to see more research into consumer attitudes to the obesogenic environment such that we can identify more effective ways to engage people in public health prevention programmes.

2.2.2. More research is also needed to discover how more practical interventions such as food labelling and information campaigns could be better tailored and improved to facilitate behaviour change among populations.

2.3.*Robust interventions*

2.3.1. Greater funding needs to be assigned to interventions which seek to identify more effective treatment and prevention strategies. The Cochrane systematic reviews into effective methods for the prevention and treatment of obesity highlight a lack of robust intervention trials.

3. **How can the availability and comparability of data on obesity be improved, in particular with a view to determining the precise geographical and socioeconomic distribution of this condition?**

3.1. At present, disparities in the type of information collected, methods used and infrequency of data collection within some member states makes cross-comparisons difficult.

3.2. We would recommend that the EU consider measures to promote ongoing obesity surveillance across EU member states rather than looking to take a snapshot of the current obesity picture. Regional and socio-economic health statistics could regularly be collected centrally by a dedicated organisation from all member states, using a similar model to the EU Social Attitudes Survey.

3.3. By establishing precisely what information should be collected and how it should be measured and recorded, the EU could set up a central database of information on the prevalence of obesity across Europe. Datasets could then be made freely available online to allow individual member states to evaluate the efficacy of local obesity prevention and treatment programmes whilst also permitting comparisons and evaluations to be made at a European level.

4. **When providing nutrition information to the consumer, what are the major nutrients, and categories of products, to be considered and why?**

4.1. We would encourage the EU to take a whole food approach to any consumer communications. Most consumers do not view foods in terms of the nutrients they contain and indeed, are confused about the nutrient content of many foods. Instead, any obesity prevention campaign should promote a balanced diet using practical examples of how small changes can have a big impact on your diet.

4.2. More should also be done to promote the nutritional benefits of foods in each of the major food groups and provide practical information on how to select or prepare

healthier meals. Food-based dietary guidelines do not provide practical guidance on how popular meals would be categorised e.g. spaghetti Bolognese, pizza, Indian curries or take-away Chinese meals and therefore fail to show consumers how to select healthier choices of their favourite foods.

5. **Which kind of education is required in order to enable consumers to fully understand the information given on food labels, and who should provide it?**
   5.1. Nutrient panels on foods need to be simplified so that consumers find them easier to interpret. We would recommend conducting a review of research into food labels across Europe. Ideally, information should be given both per 100g and per typical serving but consumers also need to be taught how to use this information to compare products within a retail category e.g. fats, oils and spreads and to compare foods across categories e.g. a chocolate bar with a packet of crisps.

   5.2. Information should not however remain unique to pre-packaged foods. We believe that providing basic nutritional information on fresh products in store, especially fruits and vegetables (either the raw values or by typical cooking methods) would help educate consumers about the nutritional and calorie content of fresh products.

   5.3. Written information available either in supermarkets or through medical surgeries can be helpful for consumers – in particular, shopping cards which help put the nutritional information into context of what is a lot and what is a little of any single nutrient. However, these do little to target those who would most benefit from it i.e. non-health conscious consumers, the illiterate or those from lower socio-economic classes.

   5.4. Information should certainly be provided by a not-for-profit organisation with local recognition for integrity of information. This could be a government organisation or at the very least, should be government endorsed to ensure that work in this area filters into other food, nutrition and obesity issues at a national and policy-driven level.

   5.5. Information on how to interpret and read food labels should also incorporated into local education curricula for older children so that they also develop the skills to be able to make judgments about the nutritional content of the foods that they buy.

6. **Are voluntary codes ("self-regulation") an adequate tool for limiting the advertising and marketing of energy-dense and micronutrient-poor foods? What would be the alternatives to be considered if self-regulation fails?**
   6.1. We would recommend making legislative changes to current advertising and marketing practices such that the advertising, marketing, promotion and product placement of unhealthy foods is restricted, particularly during children's viewing times (in the UK, until 9pm).

   6.2. The UK nutrient profiling model has been refined and developed specifically for the purpose of helping regulators and manufacturers identify foods which can and cannot be promoted through advertising to children. The final model works extremely well and has the potential to be used beyond this, for example, to restrict the use of health claims, assess foods to be sold in schools etc.

   6.3. Evidence from nutrition signposting initiatives in the UK however show that whilst mandatory action is not required to bring all stakeholders together to work on a project, it is essential if competitors are to be forced to use a uniform design to present information that could potentially be damaging to their brand and make product comparisons easier (e.g. the use of red 'traffic lights' on pack).

6.4. In the UK, the threat of mandatory action, should the current voluntary code to improve consumer understanding of nutrition information on packaging fail, has done little to promote conformity. We would therefore encourage the EU to make legislative changes that force manufacturers into responsible marketing and advertising practices.

7. **How can consumers best be enabled to make informed choices and take effective action?**

7.1. We feel that more needs to be done to identify the best means of targeting people from low socio-economic backgrounds who most need to be educated about the importance of healthy diets and increasing activity for the prevention of obesity and chronic disease. Some consumers may be unable to make 'informed choices' due to poor levels of literacy. For these individuals, information provision may do little to improve their health. We would therefore recommend that the EU seeks more effective channels to improve the health of these individuals.

7.2. Consumers need to be given simple advice that they can trust. At present, in the UK, consumers appear to be confused about what constitutes a healthy diet and are reliant on the food industry and the media for much of this information.

7.3. We also need to see better engagement between authorities that have the ability to impact on consumers' knowledge and understanding about diet and physical activity, particularly at a government level. These include school-, sports-, health-, transport-, and food-related organisations. Europe-wide cohesion has the potential to have a greater impact on the food industry as many companies now market and produce the same products across the EU.

8. **In the field of nutrition and physical activity, which should be the key messages to give to consumers, how and by whom should they be delivered?**

8.1. Emphasising the importance of maintaining energy balance should be key to all communications.

8.2. Increasing awareness of the health consequences of poor diets and low levels of activity should also be a key message. This is essential if we are to engage the public and drive change in unfavourable environments. This approach has been successful in the case of smoking cessation, where the promotion of the health consequences of tobacco use has led to reduced rates of smoking.

9. **What is good practice for fostering healthy dietary choices at schools, especially as regards the excessive intake of energy-dense snacks and sugar-sweetened soft drinks?**

9.1. A number of initiatives have been introduced in the UK in at attempt to improve children's nutrient intakes in the school environment. Schools are now encouraged to develop nutrition policies such as restricting the sale of or inclusion of sugar-sweetened beverages in school canteens, vending machines and children's lunch boxes and offer meals that meet nutrient standards. Public pressure following the Jamie Oliver 'School Dinners' broadcast documentary has also prompted announcements from most major soft drink and confectionery manufacturers that they will no longer market their products to children under the age of 11 years.

9.2. Offering price reductions on low-fat snack foods in vending machines can significantly increase preference for these choices over high fat ones. Two studies have shown that reducing the price of low-fat snacks by up to 50% leads to increases in their consumption (French et al 1997, French et al 2001). In one of these, decreases in price by 10%, 25% and 50% increased uptake of low-fat snacks by 9%, 39% and 93% respectively

(French et al 2001). However, selection of these foods falls to baseline levels when pricing returns to pre-intervention levels (French et al 1997).

9.3. Introducing policies which restrict the sale of large portions of energy-dense foods in schools may be a successful means of lowering calorie intakes in children. Studies by Barbara Rolls and others suggest that we habitually consume the same proportion of food irrespective of its energy density. Moreover, there is little evidence to suggest that increased portion size leads to greater satiety, thereby increasing the propensity to overeat. In a study where students' meals were substituted with reduced portion sizes, students consumed 47 calories less a day (Cullen & Thompson 2005).

9.4. The School Food Trust has been established in the UK to help address the issue of healthy eating in schools in a more cohesive fashion.

10. **Which of the issues addressed in the present Green paper should receive first priority, and which may be considered less pressing?**

10.1. Public engagement should be the first priority for the EU within the context of improving diets and levels of physical activity.

References

Bere, E., Veierod, M. B., & Klepp, K. I. 2005, "The Norwegian School Fruit Programme: evaluating paid vs. no-cost subscriptions 3", *Prev.Med.*, vol. 41, no. 2, pp. 463-470.

Bere, E., Veierod, M. B., Bjelland, M., & Klepp, K. I. 2005, "Free school fruit--sustained effect 1 year later 2", *Health Educ.Res.*

Birch, L. L. & Marlin, D. W. 1982, "I don't like it;I never tried it: effects of exposure on two-year-old children's food preferences", *Appetite*, vol. 3, pp. 353-360.

Birch, L. L., McPhee, L., Shoba, B. C., Pirok, E., & Steinberg, L. 1987, "What kind of exposure reduces children's children's food neophobia?Looking vs tasting", *Appetite*, vol. 9, pp. 171-178.

Birch, L. L., Gunder, L., Grimm-Tomas, K., & Laing, D. 1998, "Infants Consumption of a new food enhances acceptance of similar foods", *Appetite*, vol. 30, pp. 283-295.

Carruth, B. R., Ziegler, P. J., Gordon, A., & Barr, S. I. 2004, "Prevalence of picky eaters among infants and toddlers and their caregivers' decisions about offering a new food", *J.Am.Diet.Assoc.*, vol. 104, no. 1 Suppl 1, p. s57-s64.

Carruth, B. R. & Skinner, J. D. 2000, "Revisiting the picky eater phenomenon: neophobic behaviors of young children", *Journal of the American College of Nutrition*, vol. 19, pp. 771-780.

Cullen, K. W., Baranowski, T., Rittenberry, L., Cosart, C., Owens, E., Hebert, D., & de Moor, C. 2000, "Socioenvironmental influences on children's fruit, juice and vegetable consumption as reported by parents: reliability and validity of measures", *Public Health and Nutrition*, vol. 3, pp. 345-356.

Cullen, K. W., Baranowski, T., Rittenberry, L., Cosart, C., Hebert, D., & de Moor, C. 2001, "Child-reported family and peer influences on fruit, juice and vegetable consumption: reliability and validity of measures", *Health Education Research*, vol. 16, no. 2, pp. 187-200.

Cullen, K. W. & Thompson, D. I. 2005, "Texas school food policy changes related to middle school a la carte/snack bar foods: potential savings in kilocalories 1", *J.Am.Diet.Assoc.*, vol. 105, no. 12, pp. 1952-1954.

Cooke, L., Wardle, J., Gibson, E. L., Sapochnik, M., Sheiham, A., & Lawson, M. 2004, "Demographic, familial and trait predictors of fruit and vegetable consumption by preschool children", *Public Health Nutrition*, vol. 7, pp. 295-302.

French, S. A., Story, M., Jeffery, R. W., Snyder, P., Eisenberg, M., Sidebottom, A., & Murray, D. 1997, "Pricing strategy to promote fruit and vegetable purchase in high school cafeterias", *J.Am.Diet.Assoc.*, vol. 97, no. 9, pp. 1008-1010.

French, S. A., Jeffery, R. W., Story, M., Breitlow, K. K., Baxter, J. S., Hannan, P., & Snyder, M. P. 2001, "Pricing and promotion effects on low-fat vending snack purchases: the CHIPS Study", *Am.J.Public Health*, vol. 91, no. 1, pp. 112-117.

Gerrish, C. J. & Mennella, J. A. 2001, "Flavor variety enhances food acceptance in formula-fed infants", *American Journal of Clinical Nutrition*, vol. 73, pp. 1080-1085.

Harper, L. & Sanders, K. M. 1975, "The effect of adults' eating on young children's acceptance of unfamiliar foods", *Journal of Experimental Child Psychology*, vol. 20, pp. 206-214.

Loewen, R. & Pliner, P. 1999, "Effects of prior exposure to palatable and unpalatable novel foods on children's willngness to taste other novel foods", *Appetite*, vol. 32, pp. 351-366.

Newman, J. & Taylor, A. 1992, "Effect of a means-end contingency on young children's food preferences", *Journal of Experimental Child Psychology*, vol. 64, pp. 200-216.

Pliner, P. & Stallberg-White, C. 2000, ""Pass the ketchup, please": familiar flavors increase children's willingness to taste novel foods", *Appetite*, vol. 34, pp. 95-103.

Skinner, J. D., Carruth, B. R., Bounds, W., Ziegler, P. J., & Reidy, K. 2002, "Do food-related experiences in the first 2 years of life predict dietary variety in school-aged children?", *Journal of Nutrition Education and Behavior*, vol. 34, no. 6, pp. 310-315.

Sullivan, S. A. & Birch, L. L. 1990, "Pass the sugar, pass the salt: experience dictates preference", *Developmental Psychology*, vol. 26, pp. 546-551.

Sullivan, S. A. & Birch, L. L. 1994, "Infant dietary experience and acceptance of solid foods", *Paediatrics*, vol. 93, pp. 271-277.

WCRF (1997) Food, Nutrition and the Prevention of Cancer: a global perspective. World Cancer Research Fund/ American Institute for Cancer Research.

Wells, L. & Nelson, M. 2005, "The National School Fruit Scheme produces short-term but not longer-term increases in fruit consumption in primary school children 3", *Br.J.Nutr.*, vol. 93, no. 4, pp. 537-542.

About Weight Concern

Weight Concern is a registered charity which was set up by Jane Wardle and others in 1997 to tackle the rising problem of obesity in the United Kingdom. The charity is committed to researching and developing more effective treatments for childhood and adult obesity and providing education and training for health professionals in the management of overweight and obesity.

The charity has a leading reputation in the field of obesity and overweight and is staffed by clinical psychologists, clinical and research dietitians and behavioural experts.

Weight Concern runs training programmes in cognitive behavioural techniques for health professionals working with people who are overweight. Weight Concern has developed self-help programmes, self-help support groups and family-based childhood obesity treatments which are already being implemented successfully in a number of Primary Care Trusts across the country.

Weight Concern Scientific Advisory Group

Weight Concern's scientific advisory group brings together many of the country's acknowledged experts in obesity:

Professor Jane Wardle (Chair) – University College London Health Behaviour Unit
Professor Annie Anderson – University of Dundee Centre for Public Health Nutrition Research
Professor John Blundell – University of Leeds Institute of Psychological Sciences
Professor Ken Fox – University of Bristol Department of Exercise and Health Sciences
Professor Marion Hetherington – University of Liverpool School of Psychology
Dr Andrew Hill – University of Leeds Academic Unit of Psychiatry and Behavioural Sciences
Professor Martin Jarvis – University College London Health Behaviour Unit
Dr Susan Jebb – Medical Research Council Human Nutrition Research Centre
Dr Mary Rudolph – Consultant Paediatrician, Leeds Community NHS Trust
Professor Andrew Steptoe – University College London Department of Epidemiology & Public Health
Dr Carolyn Summerbell – School of Health and Social Care, University of Teesside
Professor Janet Treasure – King's College London Psychological Medicine Division