

REVIEW OF THE AGENCY'S NUTRIENT PROFILING MODEL

EXECUTIVE SUMMARY

1. An independent Review Panel was set up in 2007 to assess the effectiveness of the Agency's Nutrient Profiling (NP) model at differentiating foods on the basis of their nutrient composition. The model was developed solely to assist Ofcom apply TV advertising controls which seek to improve the balance of foods being advertised to children.
2. The Panel commissioned a literature review on the latest scientific developments in nutrient profiling, consulted stakeholders, held an academic workshop attended by EU and international academics and sought stakeholder and SACN views on its draft recommendations.
3. The Review Panel recommended one change to the model: removal of the protein cap, which was included to safeguard against foods high in fat, salt and/or sugars passing the model due to their protein content. SACN expressed reservations about the public health implications associated with removal of the protein cap, and that if this modification was made the impact would need to be carefully monitored.

Board Action Required:

4. The Board is invited to:
 - **note** that the Review Panel has recommended, based on the testing work it has undertaken, that the protein cap may no longer be required and should be removed, as doing so would have little impact on the classification of foods;
 - **note** that SACN has expressed reservations about the public health implications of reclassifying some foods from 'less healthy' to 'healthier' particularly in respect of the sugary breakfast cereals, if the protein cap is removed;
 - **note** that SACN and the Review Panel both consider that if the protein cap were to be removed, then monitoring arrangements would need to be put in place to assess its effect no earlier than 12 months after the date of implementing the change;
 - **note** the clarification provided by BCAP on its guidance on use of the NP model in relation to recipe and serving suggestion advertisements; and
 - **agree to advise Ministers that the protein cap should remain in place.**

NUTRITION DIVISION

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Issue

1. To agree advice to Ministers following the independent review to assess the effectiveness of the Agency's Nutrient Profiling (NP) model. The model is used by Ofcom to restrict TV advertising of 'less healthy' foods to children. It applies to all foods and drinks.

Strategic Aims

2. This work contributes to the Agency's strategic plan to help secure changes to the way food is promoted to children (an area which UK Health Department's lead on)¹.

Background

3. In October 2005 the Board recommended that the Agency's NP model (as described in Board paper FSA 05/10/04²) was suitable for use by Ofcom to determine which foods would be allowed to be advertised during children's TV, and committed to reviewing the effectiveness of the model one year from its first date of use. A summary of the process to develop the model can be found at Annex 1. The independent review process was completed at end of 2008 and is the subject of this paper.
4. In February 2007 Ofcom announced its intention to use the Agency's NP model to restrict broadcast advertising of 'less healthy' foods (those which do not 'pass' the model) in and around programmes specifically made for children and of particular appeal to children. The first phase of Ofcom's restrictions came into force in April 2007, with the final phase being implemented in January 2009. Ofcom forecast that when fully implemented the controls would be expected to reduce impacts of 'less healthy' food advertising by 41% for children aged 4-15 years. Ofcom's interim monitoring activities suggest that there has been a 34% reduction in adverts for 'less healthy' foods seen by children (4-15 years) between 2005 and 2007/08³. Ofcom's final report on the impact of its controls is expected in 2010.

¹http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082378
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094550
<http://www.scotland.gov.uk/Publications/2008/06/20155902/0>
www.dhsspsni.gov.uk (Fit Futures – website being updated)

www.healthschool.org.uk (Food and Fitness -Promoting Healthy Eating and Physical Activity for Children and Young People in Wales)

² <http://www.food.gov.uk/multimedia/pdfs/fsa051004.pdf>

³ http://www.ofcom.org.uk/media/news/2008/12/nr_20081217

5. In October 2008 the Department of Health (DH) published its report on changes in food and drink advertising and promotion to children from 2003 to 2007⁴. The Ofcom restrictions were in place for the last 8 months of the period for which broadcast data were collected. In the case of child-themed⁵ TV viewing, it concluded that children saw 32% less overall food and drink advertising and 66% fewer child-themed food and drink advertising in 2007 than in 2003. This equates to 4.7 billion fewer impacts⁶ amongst children aged 4-15 years for child-themed food and drink adverts in 2007 compared to 2003. TV was the only medium in which consistent annual reductions in child-themed advertising spend were found with the biggest decreases in confectionery (62% since 2003), fast food restaurants (71% since 2003), non-alcoholic drinks (52% since 2003) and breakfast cereals (37% since 2003). The report found that the annual spend for overall food and drink advertisements across all media increased by 19% during the period.
6. The Agency's NP model uses a scoring system which allocates points on the basis of a products nutrient content per 100g. All scores are recipe dependent (which provides an opportunity for manufacturers to innovate to achieve reclassification and competitive advantage). Points scored for protein (a proxy for calcium, iron and n-3 fatty acids), fibre, fruit, vegetable and nut content are subtracted from points for energy density, saturated fat, total sugars and sodium. Foods which score 4 points or more, and drinks which score 1 point or more are described as 'less healthy'. Annex 2 provides details of the model and a worked example.
7. The Commission is developing an EU NP model as required by EU Regulation 1924/2006,⁷ to ensure all foods which bear nutrition and health claims do not mislead consumers about what is a healthy choice.. The proposed EU model is intended to be applied to all foods. The proposed approach exempts a small number of food groups (including fruit and vegetables with no other added ingredients) and establishes ten categories of foods – a generic one plus nine product categories which represent the foods which contribute important nutrients to the diet. Thresholds for salt, saturated fat and sugar content are being established, on a per 100g basis, with those for the generic group being more stringent than the thresholds for the other groups. Discussions to reconcile the various views of Member States continue. A comparative analysis of the Agency NP model with the latest version of the proposed EU model (recognising that the two models have different purposes) suggests that there is more than 80% agreement between them in terms of product assessment.

⁴ http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_089129

⁵ Adverts using licensed characters, children's media connection, free gifts or novelty food design.

⁶ One impact is one person seeing one advert once.

⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:012:0003:0018:EN:PDF>

Review of the Agency's NP model

8. The composition of the independent Review Panel⁸ and its terms of reference⁹ were agreed with stakeholders. The Panel commissioned a literature review on the latest scientific developments in nutrient profiling, consulted stakeholders on the issues it should consider, held an academic workshop attended by EU and international academics and sought stakeholder and SACN views on its draft recommendations. A detailed account of the work carried out during the Review is given at Annex 3. The process has been assessed against the Agency's Science checklist attached at Annex 4.
9. Stakeholders asked the Review Panel to consider a number of issues relating to the NP model. Table 1 in Annex 3 outlines the issues raised and the Panel's considerations. Having carefully reviewed the available evidence relating to these issues, the Review Panel commissioned additional work and the assistance of an academic workshop to consider 4 issues:
- whether the **base of the NP model** should be based on portion size rather than 100g, in view of concerns that some food categories eaten in small portions were being unfairly penalised;
 - whether the NP model should include specific **food categories** (such as cheese) with more lenient thresholds in order to recognise their contribution to a balanced diet;
 - how the NP model should be applied to advertisements featuring **recipes and serving suggestions** in a way that does not discourage the promotion of home cooking;
 - whether **the protein cap**, incorporated into the model as a safeguard to mitigate against processed foods high in fat, salt or sugar being classified as 'healthier' by virtue of their protein content, was warranted.
10. The workshop participants concluded that there was no advantage to be gained in changing the base of the NP model from 'per 100g' to 'per portion' with respect to the NP model's intended purpose. Distinct disadvantages were identified in considering a 'per portion' base, such as the variation in manufacturers' declared portion sizes for similar foods and the variability in amounts consumed by children of different ages¹⁰. The workshop participants also considered additional categories for a range of foods, but agreed that there were no justifiable

⁸ <http://www.food.gov.uk/multimedia/pdfs/npreviewpanel.pdf>

⁹ <http://www.food.gov.uk/multimedia/pdfs/npreviewremit.pdf>

¹⁰ Evidence on portion sizes is presented in the workshop report found at: www.food.gov.uk/multimedia/pdfs/npworkshop080228.pdf

nutritional arguments to include additional categories within the NP model. The Review Panel agreed with these findings and did not consider these issues further. All the conclusions from the academic workshop are detailed in Table 2 in Annex 3.

11. The Review Panel agreed with the workshop conclusions that recipe advertising and the protein cap warranted further consideration.

Recipe Advertising

12. At the Agency's request the Broadcast Committee of Advertising Practice (BCAP)¹¹ has provided clarification on when it intends its rules to be applied in respect of advertisements featuring recipes or serving suggestions. BCAP's guidance provides scope for Clearcast, the body that clears television advertisements for transmission, to use discretion when assessing whether the adverts should be subject to restrictions¹². BCAP has clarified that adverts that include recipes or serving suggestions should be restricted if they promote a 'less healthy' ingredient or product. Advertisements that make an incidental reference to unbranded, typically 'less healthy' products as part of a recipe (e.g. drizzle of oil on salad) should not normally be restricted.

Protein Cap

13. Protein is included in the model as a marker for three important nutrients (calcium, iron and n-3 fatty acids). The protein cap was incorporated into the model as a safeguard to mitigate against foods such as burgers with particularly high levels of fat, salt or sugar being classified as 'healthier' by virtue of their protein content. It prevents products that score 11 or more points for energy density, saturated fat, total sugar and sodium from being able to score points for protein, unless they contain greater than 80% fruit, vegetable or nuts.

Consultation

14. The Agency conducted a 12-week public consultation on the Review Panel's draft recommendations which set out how the Panel had considered the issues raised and the conclusions it had drawn¹³. Overall its view was that the NP model effectively categorises foods on the basis of their nutrient composition, in the context of Ofcom's broadcasting controls. It proposed one change, that the protein cap be removed.

¹¹ BCAP is the industry body responsible for the UK's broadcast advertising Codes, and is contracted by Ofcom to write and enforce the codes of practice that govern TV and radio advertising. BCAP regulate the content of all TV and radio commercials on channels and stations licensed by Ofcom, and regulate advertising on interactive television services, TV shopping channels and Teletext services.

¹² http://www.cap.org.uk/cap/codes/broadcast_codes/Guidance_Notes/Differentiating+HFSS+product+TV+Advertisements+from+Brand+TV+Advertisements.htm

¹³ <http://www.food.gov.uk/consultations/ukwideconsults/2008/?completed=Yes>

15. In total 38 stakeholder responses were received from industry, consumer groups and NIFAC. The views on the proposal to remove the protein cap are set out in paragraphs 19-24. Responses from some sectors of industry also included objections to the scientific basis of the model and restated their opposition to decisions on the base of the model and food categories on the grounds that it penalised food consumed in less than 100g quantities (e.g. breakfast cereals and cheese). Having reviewed these comments and carried out further testing work, the Review Panel sought the views of SACN on its draft recommendations before finalising its recommendations.

SACN's Advice

16. SACN agreed that the NP model is an effective mechanism that differentiates food and drink products on the basis of their nutrient composition in the context of the Ofcom children's TV restrictions. However they expressed reservations about the public health implications if the protein cap were removed, because this would lead to the classification of some foods from 'less healthy' to 'healthier' for example some crisps and sugary breakfast cereals. It felt that if the protein cap were to be removed, then monitoring arrangements would need to be put in place to assess its effect no earlier than 12 months after the date of implementing the change. A note of the SACN discussions is at Annex 5.

Protein Cap Data Analysis

17. The data presented by the Review Panel indicates that the protein cap could be removed from the model with limited impact on the classification of foods. Of the 894 products tested, an additional 25 products (2.8%) would be classified as 'healthier' if the protein cap were removed, with the greatest effect being found in breakfast cereals (18 out of the 66 breakfast cereals tested (27%)). Some crisp and snack products would also be reclassified. Table 3 in Annex 3 provides a list of these products. The Panel noted that breakfast cereals contribute only 8% of children's added sugar intake and that the major sources of sugar in children's diets were sugary drinks and confectionery.

18. The Panel's testing work also found that the NP scores of many foods such as cheeseburgers, chicken nuggets, jam doughnuts, ham and crisps would be lowered and brought closer to the boundary between 'less healthy' and 'healthier' if the protein cap were removed. The Panel felt that this might provide an incentive for further product reformulation. Concerns that extra protein may be added to foods to increase 'C' nutrient scores was considered unfounded because of the cost, and in many cases technical difficulties associated with doing so. Based on the testing undertaken during the review the Panel also felt that the protein cap may no longer be serving its intended purpose (see paragraph 13) and that its inclusion may be hampering potential reformulation activities.

19. The Panel's final recommendations are at Annex 6. The proposed modified model without the protein cap, together with an illustration of the effect of removing the protein cap on the classification of a breakfast cereal is provided at Annex 7.

Conclusion

20. There is general agreement between the Panel and SACN that the model is fit for its intended purpose (to assist Ofcom in restricting TV advertising of 'less healthy' food to children). Views on the protein cap issue differ slightly and as a consequence there are two possible options.

21. The first is to recommend removing the protein cap. This approach is favoured by the Review Panel as it is not convinced that the scientific rationale for retaining it is strong. This would simplify the model and might also stimulate further reformulation.

22. Removal would also be welcomed by sectors of industry and some public health bodies. In particular, breakfast cereal manufacturers have a number of products which would be reclassified as 'healthier' or could be reclassified after reformulation. However a number of other public health and consumer organisations have argued that such a move would send the wrong signal to industry and weaken the controls (e.g. allow children to see more adverts for breakfast cereals with added sugar). These same organisations consider that more time is needed to assess the effect on reformulation before taking a decision and have suggested the same period as the Ofcom review which runs into 2010 should be applied.

23. The impact on children's TV viewing would be limited as the number of products affected would be small. However childhood obesity levels and intakes of salt, saturated fat and added sugars are too high and tackling these is a Government priority. This will be a challenge particularly in the face of worrying trends such as increasing sales of sugary breakfast cereals^{14,15}. It is crucial that Change4Life messages relating to reducing sugar intake are not undermined.

24. Alternatively, the protein cap could be retained. This would maintain the *status quo* in terms of advertisements to children and would alleviate concerns, such as those expressed by SACN, about increased promotion of sugary breakfast cereals to children and some public health and consumer groups about making modifications ahead of the conclusion of the Ofcom review. There would be no potential for public health programmes to be undermined. However, affected industry sectors (e.g. breakfast cereal and snack manufacturers) are likely to object.

¹⁴ Breakfast Cereals – UK. Mintel, February 2008.

¹⁵ 'Why are cereals getting sweeter', The Grocer, 24 January 2009, p68.

25. Overall, although there is some scientific justification for removing the protein cap, the wider public health arguments for maintaining the *status quo* are more persuasive. It is therefore recommended that the Board agree the protein cap should be retained.

Board Action Required

26. The Board is asked to:

- Note that the Review Panel has recommended, based on the testing work it has undertaken, that the protein cap may no longer be required and should be removed, as doing so would have little impact on the classification of foods.
- Note that SACN has expressed reservations about the public health implications of reclassifying some foods from 'less healthy' to 'healthier' particularly in respect of the sugary breakfast cereals, if the protein cap is removed.
- Note that SACN and the Review Panel both consider that if the protein cap were to be removed, then monitoring arrangements would need to be put in place to assess its effect no earlier than 12 months after the date of implementing the change.
- Note the clarification provided by BCAP on its guidance on use of the NP model in relation to recipe and serving suggestion advertisements.
- **Agree to advise Ministers that the protein cap should remain in place.**

DEVELOPMENT OF THE NUTRIENT PROFILING MODEL

1. The Department of Health's White Paper (*Choosing Health*) and the Food Standard's Agency's 2004 Action Plan on Food Promotions and Children's Diets contained a series of recommendations aimed at addressing the imbalance in promotional activity of foods to children. In 2004, the Agency commissioned research to develop a nutrient profiling model, to support Ofcom's work to further regulate broadcast advertising of foods to children. The final nutrient profiling model was handed over to Ofcom in December 2005.
2. The NP model was subject to rigorous scientific scrutiny and extensive consultation. The following timeline indicates the key milestones:

May 2004	Agency commissioned research to identify and consider options for nutritional criteria to define 'foods high in fat, salt or sugar' and 'healthier options', in relation to food promotion and children's diets. This work was undertaken by researchers at the British Heart Foundation Health Promotion Research Group (BHFHPRG) based at Oxford University, and overseen by an Expert Group, comprising nutrition scientists, dietitians, food industry and consumer organisation representatives and policy makers.
October 2004	Publication of the initial research. The report includes a literature review of UK, European and North American approaches to defining foods high in fat, salt or sugar and 'healthier food choices', applicable to children aged 2-16 years, and establishes a systematic approach to developing NP models. Subsequent development, testing and refining of various models is described, focussed on children aged 11-16 years, concluding that a simple scoring system (model SSCg3d) should be tested and possibly refined further. The report can be found at: www.food.gov.uk/multimedia/pdfs/nutrientprofilingfullreport.pdf
November 2004	The Agency launched a 12-week public consultation to seek views on the development and scientific basis of the preferred model (SSCg3d). www.food.gov.uk/consultations/ukwideconsults/2004/nutrientprofiling More than 80 responses were received from a range of stakeholders: www.food.gov.uk/multimedia/pdfs/nutprofilechildren.pdf .
January 2005	Additional work was published which gave effect to a recommendation from the Oct. 2004 report, to test the applicability of the preferred model (SSCg3d) in relation to promotion of food to children aged 5-10 and to adults. The report can be found at: www.food.gov.uk/multimedia/pdfs/nutprofmodelforadults.pdf
23 February 2005	The Scientific Advisory Committee on Nutrition (SACN) discussed the model at their meeting and submitted a response to the Nov. 2004 consultation; www.sacn.gov.uk/meetings/committee/2005_02_23.html .
25 February 2005	Agency convened a scientific workshop to seek views from nutrition and public health academics on the initial research report (Oct. 2004), which outlined development of the recommended model and the further report (Jan. 2005) addressing its applicability to children aged 5-10 and adults. The workshop report can be found at:

	www.food.gov.uk/multimedia/pdfs/nutprofworkshop250205.pdf
April 2005	The Expert Group, including representatives from SACN, met to discuss the results of the consultation and workshop and to prioritise areas for further testing and refinement of the model. Concurrently, the Agency contracted the team who carried out the initial research project to undertake this work.
April – July 2005	BHFHPRG researchers and the Expert Group met on a monthly basis to consider each of the possible refinements to model SSCg3d suggested in the consultation responses. The Group identified five priority areas for refinement, as found at: www.food.gov.uk/healthiereating/nutres/nutprof . Further iterations of the model were developed and tested which sought to address these issues. Model (WXY), (model SSCg3d with 3 major modifications and minor amends to various scores and thresholds ¹), was found to deal with the priority areas for refinement most effectively. Stages of development of the proposed final model (WXY) are described at: www.food.gov.uk/multimedia/pdfs/npreportsept05.pdf (see also Sept. 2005).
July 2005	Agency launched a second public consultation to seek views on the proposed final model (WXY) and scoring thresholds to define 'less healthy' and 'healthier choice' foods. Views were sought on the technical and practical applicability of the model as a tool for helping improve regulation of food advertising, sponsorship and promotion to children, as well as the accuracy of the refined model in classifying foods. Details of the consultation and a summary of responses, over 70 from a range of stakeholders, can be found at: www.food.gov.uk/consultations/ukwideconsults/2005/notprofjuly05
September 2005	A second NP research report was published, after consideration of the consultation responses. It describes steps taken to develop model WXY and the development of improved methods of testing which involved development of an on-line questionnaire sent to nutrition and dietetic professionals, to rate a selection of foods as healthy or less healthy. Responses were compared to model WXY, and showed a good correlation with the scores of foods from the model. The report can be found at: www.food.gov.uk/multimedia/pdfs/npreportsept05.pdf
September 2005	SACN held a telephone conference call to discuss the refined NP model (WXY). SACN supported the model refinements and thresholds set including 2 further refinements, to score nuts in the same way as for fruit and vegetables and to introduce cut-offs to ensure foods high in energy, fat, sugar or sodium can not be deemed as 'healthier choices' by the model due to their fibre, protein or fruit and vegetable content. Details can be found at: www.sacn.gov.uk/meetings/committee/2005_09_12.html
October 2005	The Agency Board discusses the outcomes on the second consultation of the recommended model (WXY) and SACN's views on the proposed modifications to address issues raised in the consultation (as per Sept. 2005 above). The

¹ Modifications replaced NMES with total sugars, took account of fibre, and replaced calcium, iron and omega-3 with protein. As such the model was considered to more accurately recognise the importance of cereal, meat and dairy foods to the diet. In addition, scoring thresholds for foods and drinks were proposed to account for one area for refinement (to deal with the nutrient density of foods), and energy density scores were capped at a lower level to deal with the issue of 'discrimination' against fats and oils, as raised in the consultation.

	<p>Board endorses SACN advice and agrees that the NP model should be recommended to Ofcom for use in development of further controls on the broadcast advertising of foods to children. The Board paper can be found at: www.food.gov.uk/multimedia/pdfs/fsa051004.pdf</p>
December 2005	<p>Final NP model research report published. The refinements suggested by SACN and the consultation are incorporated. The report can be found at: http://www.food.gov.uk/multimedia/pdfs/nutprofr.pdf</p> <p>Guidance was also published on how to calculate scores for fruit and vegetables in processed foods. A copy of the guidance can be found at: http://www.food.gov.uk/multimedia/pdfs/nutprofpguide.pdf</p> <p>The final NP model (WXYAP11FVN.nut) is handed over to Ofcom for use as a tool to categorise foods on the basis of their nutrient content for broadcast advertising restrictions.</p>

NUTRIENT PROFILING MODEL

1. The Agency's NP model is known as a 'simple scoring' system, where points are allocated on the basis of the nutritional content in 100g of a food or drink. There are three steps to working out the overall score for the food or drink:

Work out total 'A' points

2. Total 'A' points = (points for energy) + (points for saturated fat) + (points for sugars) + (points for sodium).
3. The following table shows the points scored, depending on the amount of each component in 100g of the food:

<i>Points ⇒</i>	Energy (kJ)	Sat Fat (g)	Total Sugar (g)	Sodium (mg)
0	≤ 335	≤ 1	≤ 4.5	≤ 90
1	>335	>1	>4.5	>90
2	>670	>2	>9	>180
3	>1005	>3	>13.5	>270
4	>1340	>4	>18	>360
5	>1675	>5	>22.5	>450
6	>2010	>6	>27	>540
7	>2345	>7	>31	>630
8	>2680	>8	>36	>720
9	>3015	>9	>40	>810
10	>3350	>10	>45	>900

4. If a food or drink scores 11 or more 'A' points then it cannot score points for protein unless it also scores 5 points for fruit, vegetable and nuts.

Work out total 'C' points

5. Total 'C' points = (points for fruit, vegetable and nut content) + (points for fibre [either NSP or AOAC]) + (points for protein).
6. The following table shows the points scored, depending on the amount of each component in 100g of the food:

Points ⇒	Fruit, Veg & Nuts (%)	NSP Fibre (g)	Or AOAC Fibre (g)	Protein (g)
0	≤ 40	≤ 0.7	≤ 0.9	≤ 1.6
1	>40	>0.7	>0.9	>1.6
2	>60	>1.4	>1.9	>3.2
3	-	>2.1	>2.8	>4.8
4	-	>2.8	>3.7	>6.4
5	>80	>3.5	>4.7	>8.0

Work out overall score

7. If a product scores <11 'A' points then the score is calculated as follows:

Overall score = [total 'A' points] – [total 'C' points].

8. If a product scores ≥11 'A' points and 5 points for fruit, vegetables and nuts, the score is calculated as:

Overall score = [total 'A' points] – [total 'C' points].

9. If a food scores ≥11 'A' points and scores <5 points for fruit, vegetables and nuts, the score is calculated as:

Overall score = [total 'A' points] – [points for fibre + points for fruit, vegetable and nuts points only].

(i.e. the “protein cap” applies and a score for protein **cannot** be included)

10. A **food** is classified as 'less healthy' where it scores **4 points or more**.

11. A **drink** is classified as 'less healthy' where it scores **1 point or more**.

WORKED EXAMPLE: BREAKFAST CEREAL (CURRENT NP MODEL)

100g of breakfast cereal contains:

Energy (kJ)	Sat Fat (g)	Sugar (g)	Sodium (mg)	AOAC Fibre (g)	Protein (g)	Fruit/veg/nut (%)
1434	0.2	21	450	12	14	0

Step 1 - work out the scores for the 'A' nutrients:

This breakfast cereal contains:

- 1434kJ energy per 100g, so it scores 4 points
- 0.2g saturated fat per 100g, so it scores 0 points
- 21g sugar per 100g, so it scores 4 points
- 450mg sodium per 100g, so it scores 4 points

So the total score for 'A' nutrients is: $4 + 0 + 4 + 4 = \underline{12}$

Points ⇒	0	1	2	3	4	5	6	7	8	9	10
Energy (kJ)	≤335	>335	>670	>1005	>1340	>1675	>2010	>2345	>2680	>3015	>3350
Sat Fat (g)	≤1	>1	>2	>3	>4	>5	>6	>7	>8	>9	>10
Total Sugar (g)	≤4.5	>4.5	>9	>13.5	>18	>22.5	>27	>31	>36	>40	>45
Sodium (mg)	≤90	>90	>180	>270	>360	>450	>540	>630	>720	>810	>900

Step 2 - work out the scores for the 'C' nutrients:

This breakfast cereal contains:

- 14g protein per 100g, but it scores 0 points*
- 12g AOAC fibre per 100g, so it scores 5 points
- 0% fruit/veg/nut content, so it scores 0 points

So the total score for 'C' nutrients is: $0 + 5 + 0 = \underline{5}$

****This breakfast cereal does not score points for its protein content because it scores 11 or more 'A' points and less than 5 'C' points for fruit/veg/nuts and so the protein cap applies.***

Points ⇒	0	1	2	3	4	5
Protein (g)	≤1.6	>1.6	>3.2	>4.8	>6.4	>8.0
AOAC fibre (g)	≤0.9	>0.9	>1.9	>2.8	>3.7	>4.7
Fruit/veg/nuts (%)	≤40	>40	>60	-	-	>80

Step 3 - work out overall score:

Overall score for this breakfast cereal = 'A' points - 'C' points = $12 - 5 = 7$

With an overall score of 7, this breakfast cereal is classified as 'less healthy' by the current NP model.

REVIEW PROCESS

1. In June 2007, the Agency convened a meeting with stakeholders and interested parties to discuss and agree the objective and remit of the review of the nutrient profiling model, and subsequently the membership of the independent review panel. The Panel convened for the first time in September 2007.
2. The Review Panel commissioned a literature review to update and inform the Panel on developments in the science of nutrient profiling since development of the Agency's model in 2004. This included an assessment of nutrient profiling models which are being used in a regulatory context and their respective purposes. The report was peer-reviewed by 2 academics with experience in the area of nutrient profiling and has been published on the Agency's website².
3. In October 2007 the Review Panel met with stakeholders to discuss any practical and technical issues arising from the use of the NP model and share their experiences of testing and validating nutrient profiling models. Stakeholders were also given a six week period within which to submit evidence in relation to:
 - What changes have been brought about by the implementation of the FSA's NP model which might have benefits to public health?
 - For industry representatives, how has the FSA's NP model influenced your broadcast advertising plans and/or product development?
 - Have any practical issues arisen in using the FSA's NP model? If so please submit examples and if possible indicate how these issues were countered.
 - Do you have any suggestions for improvement of the NP model? Please provide evidence to support your suggestions.
4. A summary of the Review Panel's responses to all the submissions from stakeholders has been published on the Agency's website at:
www.food.gov.uk/multimedia/pdfs/npresponses0710.pdf
5. The Review Panel commissioned evidence gathering and testing of the model to determine the validity and effectiveness of each of the 14 main issues raised by stakeholders. The outcome of this work is summarised in Table 1 below.

² <http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/nutprofilelitupdatedec07>

Table 1. Summary of main issues raised by stakeholders considered by the Review Panel.

	Issue raised	Outcome of Review Panel's considerations
1	The model should be based on portion size rather than 100g.	Agreed to consider this issue further at an academic workshop in February 2008.
2	The model should be based on food categories rather than across the board, as certain categories are unfairly penalised (e.g. cheese, breakfast cereals).	Agreed to consider this issue further at an academic workshop in February 2008.
3	Stakeholders felt that the HFSS terminology (high fat, salt or sugar) was penalising certain food groups.	Agreed that terminology should be clarified with stakeholders. The NP model classifies food and drink products which fail the model as 'less healthy'. The Review Panel considers that the terminology used by the Agency for foods failing the model is appropriate, and that foods passing the model should be referred to as 'healthier'.
4	Foods which are served in small amounts (<15g per sitting), e.g. chewing gum, Marmite, honey, should be exempt from the model.	It concluded this was not appropriate since it would allow some foods served in small portions that are high in fat, salt or sugar (such as chocolate biscuits and sausage rolls) to be eligible to be advertised to children on TV.
5	Dried fruit is penalised by the model.	It concluded that dried fruit is appropriately classified, recognising that some dried fruits do pass the NP model but those with a relatively high content of sugar do not.
6	Modification of the dried fruit, vegetable and nut (FVN) multiplier to incentivise the addition of dried fruits to breakfast cereals.	It concluded that modifying the FVN multiplier would have little impact on the classification of breakfast cereals based on the database of cereals tested and that this modification did not warrant further consideration.
7	The protein cap restricts innovation and reformulation for a number of categories (e.g. breakfast cereals and cheese).	Agreed to consider this issue further at an academic workshop in February 2008.
8	In relation to dairy products (in particular milk), lactose should be excluded from the NP model's scoring system for total sugars.	It concluded that there was no justification to exclude lactose from total sugars. The Panel considered that milk is appropriately classified by the model (as 'healthier').
9	Parnuts foods (foods with particular nutritional uses including follow-on formulas, weaning, sports and weight reduction foods) should be	It concluded that parnuts foods should not be exempt from the NP model and noted that those which fail the NP model can continue to be advertised during times outside of children's viewing slots.

	exempt from the model.	
10	One model should be used for all purposes (e.g. TV restrictions and health claims).	It considered that this issues was outside of its remit.
11	The model should not balance negative nutrients with positive nutrients.	When the NP model was developed, the use of 'negative' nutrients only (energy, fat, salt, sugar) was considered but adjusted to take account of fruit, vegetable, nut, fibre and protein content of a product (protein being a proxy for calcium, iron and n-3 fat content) following comment from industry. It considered that the development of the model was robust and would not consider this issue further.
12	The model should take account of non-milk extrinsic sugars (NMES) rather than total sugars.	It concluded that there was no justification to take account of NMES rather than total sugars.
13	The energy density score should be less dominant.	Noted by the Review Panel.
14	The model unfairly penalises adverts containing recipes.	Agreed to consider this issue further at an academic workshop in February 2008.

6. Following consideration of all the available evidence, the Review Panel identified 4 issues which would go on for further consideration at an academic workshop:

- Whether the protein cap, incorporated into the model as a safeguard to mitigate against any possible risk that processed foods high in fat, salt or sugar would be classified as 'healthier' products by virtue of their protein content was warranted.
- Whether the base of the NP model should be based on portion size rather than 100g, in relation to concerns that some food categories eaten in small portions were being unfairly penalised;
- Whether the NP model should include specific food categories (such as cheese) with more lenient thresholds in relation to concerns that the NP model was too stringent, hindered reformulation and did not adequately recognise certain nutrients contributed to the diet;
- How the NP model should be applied to advertisements featuring recipes and serving suggestions, in relation to concerns that the NP model was discouraging the promotion of home cooking.

7. The Review Panel considered the rationale underpinning the basis for the protein cap and commissioned a package of scenario testing to determine the impact of removing the protein cap on a range of foods. This testing explored the impact of removing the protein cap on a total of 721 foods from 6 databases:

- Indicator foods used during the development of the model and selected as being representative of UK diets;

- Cheese and cheese products, from the FSA Processed Food Databank³;
 - Breakfast cereals, taken from manufacturer and retailer websites in January 2008;
 - Takeaway foods, from McDonalds and Wimpy websites, January-February 2008;
 - 'Balance of Good Health' indicator foods used during the development of the model which are representative of the main food groups;
 - Processed foods, from the FSA Processed Food Databank² to represent a wider range of protein and cereal based foods, including pizzas, ready meals, buns, cakes, pastries & biscuits, desserts, bread, meat products, processed fish & shellfish products, crisps & savoury snacks, instant hot snacks, confectionery.
8. The Review Panel concluded that removing the protein cap had only a small effect on the classification of foods in the databases tested, however, the scores of many foods were lowered so that they were brought closer to the boundary between 'less healthy' and 'healthier'. From this package of testing, the Review Panel noted that removing the protein cap had the greatest effect on breakfast cereals, a total of 18 out of the 66 (27%) breakfast cereals tested being reclassified from 'less healthy' to 'healthier' when the cap was removed. Foods that did not change classification from 'less healthy' to 'healthier' but were brought close to the boundary between 'less healthy' and 'healthier' included takeaway cheeseburgers, chicken nuggets, jam doughnuts, ham and crisps.
9. The Review Panel sought views on these issues from the wider academic community through a workshop convened in February 2008. The workshop was chaired by Dr Tony Williams (St George's Hospital and member of the Scientific Advisory Committee on Nutrition) and attended by 27 independent academics and experts from the European Union and the United States with expertise in the areas of public health and nutrient profiling. Participants considered evidence on the issues including the outcomes of testing of a number of modifications to the NP model on a range of food databases. Workshop participants also considered the issues of NP model validation, with evidence from a number of independent studies showing the validity of the Agency's NP model, and the variability in children's portion sizes with age.
10. The outcomes of the workshop were published on the Agency's website and can be found at: <http://www.food.gov.uk/multimedia/pdfs/npworkshop080228.pdf>. Table 2 shows the conclusions drawn by workshop participants on the four issues considered.

³ <http://www.food.gov.uk/news/newsarchive/2008/feb/pfdbroundtwo>

Table 2. Conclusions of the academic workshop on the issues considered.

Issue considered	Conclusion of the academic workshop
Whether the protein cap, incorporated into the model as a safeguard to mitigate against any possible risk that processed foods high in fat, salt or sugar would be classified as 'healthier' products by virtue of their protein content was warranted.	That further consideration of the protein cap was warranted, although careful consideration would need to be given to the effect of removal of the protein cap on a wider range of foods which might contain protein based ingredients, such as cereal based and composite foods. The Review Panel shared these views and undertook to consider this issue further.
Whether the base of the NP model should be based on portion size rather than 100g, in relation to concerns that some food categories eaten in small portions were being unfairly penalised.	That there was no advantage to be gained in changing the base of the NP model from 'per 100g' to 'per portion' with respect to the NP model's intended purpose and its classification of foods. Distinct disadvantages were identified in considering a 'per portion' base, such as the variation in manufacturers' declared portion sizes for similar foods and that there is variability in amounts consumed by children of different ages ⁴ . The Review Panel shared these views and agreed not to consider this matter further.
How the NP model should be applied to advertisements featuring recipes and serving suggestions, in relation to concerns that the NP model was discouraging the promotion of home cooking.	That application of the model to adverts containing recipes and serving suggestions was complicated and warranted further consideration. The Review Panel shared this view and asked the FSA, the Broadcast Committee of Advertising Practice (BCAP) and Ofcom to consider further.
Whether the NP model should include specific food categories (such as cheese) with more lenient thresholds in relation to concerns that the NP model was too stringent, hindered reformulation and did not adequately recognise certain nutrients contributed to the diet.	That there were no justifiable nutritional arguments to include additional categories within the NP model for its intended purpose. The Review Panel shared these views and agreed not to consider this matter further.

11. The Review Panel commissioned further work in March 2008 to assess the implications of removing the protein cap on a wider range of foods, and sought and considered independent advice from SACN and Campden and Chorleywood

⁴ Evidence on portion sizes is presented in the workshop report found at: www.food.gov.uk/multimedia/pdfs/npworkshop080228.pdf

Food Research Association, on the likelihood that manufacturers might add protein to foods to improve their NP scores. They were advised that it was unlikely that manufacturers might add protein to foods to improve their NP scores because protein is a relatively costly ingredient and technically difficult to add to foods in significant quantities whilst retaining quality and shelf life.

12. The removal of the protein cap was tested on a further 113 foods from 5 databases:
- Foods frequently consumed by 3 year olds, identified from food diaries collected as part of the Southampton Women's Survey⁵, which represent a variety of foods including savoury snacks and confectionery products;
 - Fromage frais and yoghurts, collected from retailer and manufacturer websites in March 2008;
 - Cereal bars, collected from retailer websites in March 2008;
 - Children's ready meals, collected from retailer websites in March 2008;
 - Take away-type products, including chicken based and children's foods from retailer websites, and KFC (USA)⁶ website March 08.
13. Based on the results from this work the Review Panel considered that removal of the protein cap was unlikely to have a significant impact on the classification of the foods considered. Of note from this package of testing, 2 of the 113 products tested (Kallo savoury snack rice cakes and Sainsbury's breadsticks) were reclassified from 'less healthy' to 'healthier', and a further 3 (Marmite, Tesco fruit and fibre cereal bars and Goodies organic raspberry and apple cereal bars) would be brought closer to the boundary between 'less healthy' and 'healthier'.

Review Panel's draft recommendations and public consultation

14. Having considered all of the available evidence on testing of the protein cap modifications, and noting the basis for it, the Review Panel considered that:
- the protein cap should be removed from the NP model. In doing so, a food or drink which scores ≥ 11 'A' points (for energy, saturated fat, sugar and sodium) would no longer be prevented from scoring points for protein.
 - the issue of application of the NP model to advertisements featuring recipes and serving suggestions be considered further by the FSA, the Committee of Advertising Practice (CAP) and Ofcom.
15. In July 2008 the Agency consulted stakeholders on the Review Panel's draft recommendations. Comments were received from industry stakeholders who generally welcomed the removal of the protein cap, and noted that it would simplify the model and allow some categories of foods (such as breakfast

⁵ Data was provided by Siân Robinson (Review Panel member) from 400 2-day food diaries kept for 3-year old children (2002-2006). Foods that were eaten less than 20 times were excluded, as were fruits, vegetables and soft drinks like squashes & fizzy fruit drinks.

⁶ UK KFC nutrition data could not be sourced. www.kfc.com/nutrition

cereals) to be eligible for broadcast during children's viewing times. Comments were received from consumer and public health groups who generally disagreed with removal of the protein cap on the grounds that it would remove incentive for manufacturers to reformulate their products and that it would allow products high in fat, salt or sugar to pass the model by virtue of their protein content. All comments and views received during the consultation were considered by the Review Panel in October 2008 before seeking views of SACN on its recommendations. A summary of consultation responses considered by the Review Panel can be found at Annex 4.

16. In October 2008 following consideration of the consultation responses, the Review Panel considered the impact of removing the protein cap on up-dated and new nutrient composition data for 263 foods from the following datasets:

- Breakfast cereals from manufacturer and retailer websites;
- Cheese products (DairyLea and Philadelphia) from Kraft website
- Takeaway foods from McDonald's, Burger King, Wimpy and KFC websites;
- Crisps and snack products from manufacturer and retailer websites.

Assessment of removal of the protein cap

17. In total 894 products were tested comprising of products from the databases used during the original development of the NP model and additional product databases requested by the Review Panel.

18. The effect of removing the protein cap on all products considered by the Panel during the course of the Review can be found at Table 3. Testing of these databases showed that removal of the protein cap resulted in an additional 25 products passing the NP model and being reclassified from 'less healthy' to 'healthier'. The majority of these were breakfast cereals (18), followed by crisps (5) and snack products (2). The additional products passing the NP model represent an increase of 2.8% from the 894 products tested in total. The Review Panel noted that upon removal of the protein cap, a number of products were also brought closer to the boundary between 'less healthy' and 'healthier'.

19. Upon consideration of this evidence, the Review Panel re-affirmed its draft recommendations and sought the views of SACN.

- The Review Panel considered the scientific basis for the protein cap and concluded that it should be removed from the nutrient profiling model.
- The Review Panel also recommends that not before a minimum of 12 months has passed following removal of the protein cap, the impact of this modification on the advertising landscape should be assessed.
- With removal of the protein cap, the Review Panel considers that the NP model is a scientifically robust tool that effectively differentiates food and drink products on the basis of their nutritional composition.

Table 3. Additional products which pass the NP model upon removal of the protein cap, from a total of 894 foods tested.

Product database	Number of products tested	Number of products which pass the current NP model	Number of products which pass NP model without protein cap	Additional products which pass the NP model without protein cap
Breakfast cereals	66	20	38	Dorset Cereals berries & cherries Dorset Cereals naturally light flakes fig & grape Dorset Cereals organic fruit, nuts & seeds Jordans organic porridge oats made up with whole milk Jordans original crunchy raisin & almonds cereal Jordans superfoods granola Kallo wholearth organic classic cornflake Kellogg's all-bran bran flakes Kellogg's chocolate wheats Kellogg's special K sustain Nestle Coco Shreddies Nestle fitness Nestle shreddies, frosted Quaker oat granola Weetabix minis with fruit & nut Weetabix Oatibix bitesize Weetabix oatflake with fruit Weetabix weetaflakes with fruit (raisin, cranberry, apple)
Crisps and snacks	62	2	7	Walkers Baked Cheese & Onion Walkers Lights Cheese & Onion 25g Walkers Lights Seasalt & Cracked Black Pepper Walkers Lights Simply Salted 25g Walkers Lights Sour Cream & Chive 25g
Foods frequently consumed by 3 year olds	39	13	15	Kallo Savoury Snack Rice Cakes Sainsbury's Breadsticks
Balance of Good Health indicator foods	82	49	49	-
Cereal bars	15	0	0	-
Cheese and cheese products	70	8	8	-
Children's ready meals	7	7	7	-
Foods representative of the UK diet	90	46	46	-
Selection of foods from Processed Foods Database	346	154	154	-
Retailer takeaway-type products	11	6	6	-
Takeaway products	65	34	34	-
Yogurt and Fromage frais	41	34	34	-
Total	894	373	398	25

20. The review process and draft recommendations were presented to SACN by a member of the Review Panel via telephone conference on 28 November 2008. The paper prepared for SACN's consideration can be found at Annex 5, together with Minutes of the SACN meeting.

21. SACN members agreed that:

- Either with or without the protein cap, the NP model is an effective mechanism that differentiates food and drink products on the basis of their nutritional composition.
- The protein cap could be removed from the model with limited impact on the classification of foods.
- Removing the protein cap would simplify the model.

22. However, SACN members expressed concern:

- That the full impact of removing the protein cap was uncertain and it was not clear what benefits this would create.
- About the implications of reclassifying some foods from 'less healthy' to 'healthier'.

23. The Review Panel considered the views of SACN at its meeting on 18 December 2008, before coming to its final recommendations. Whilst there was divided opinion amongst Panel members, the majority view remained that the protein cap could not be justified scientifically and should be removed from the model. The Review Panel made some modifications to its draft recommendations to take account of SACN's views before agreeing their final recommendations (Annex 6).

24. Annex 7 shows the proposed modified model without the protein cap, together with an illustrative example on the effect of removing the protein cap on the classification of a breakfast cereal. It shows that removal of the protein cap would result in the reclassification of the breakfast cereal to from 'less healthy' to 'healthier'.

Application of the model to adverts featuring recipes and serving suggestions

25. Following the Review Panel's request for BCAP to consider the application of the model to adverts featuring recipes and serving suggestions, the Agency wrote to BCAP and asked it to consider how its guidance could be clarified to encourage adverts featuring home cooking of healthier options and recipe ideas, which may encourage people to take more interest in their diet and eat healthier foods such as fruit, vegetables and oily fish.

26. BCAP has since clarified that an advertisement that makes an incidental reference to an unbranded, typically-less healthy product as part of a recipe should not be restricted and that its guidance note⁷ also prevents a 'less healthy'

⁷http://www.cap.org.uk/cap/codes/broadcast_codes/Guidance_Notes/Differentiating+HFSS+product+TV+Advertisements+from+Brand+TV+Advertisements.htm

product from being promoted as part of a serving suggestion. The guidance therefore provides scope for the advertisement clearance body, Clearcast, to use discretion when making judgments on recipe adverts.

27. The Agency welcomes this clarification which addresses the issue of concern and awaits the outcome once the guidance has been tested by Clearcast.

NUTRIENT PROFILING REVIEW: A COMPARISON WITH THE GUIDANCE SET OUT IN THE SCIENCE CHECKLIST

The Science Checklist was agreed by the Food Standards Agency Board in February 2006. The work on nutrient profiling began in 2003 and resulted in the model being agreed in 2005 (predates it). The Nutrient Profiling Review commenced in September 2007. The Science Checklist was used as a guide during the drafting of the March 2009 Board paper. An assessment of the nutrient profiling review against the Board's science checklist is given below.

Defining the problem

1. Has the problem been clearly defined?

The Board agreed in 2005 to review the effectiveness of the NP model one year from its date of use. Ofcom's broadcast advertising restrictions came into force in April 2007, with the final phase being introduced in January 2009. The remit of the Review was agreed with stakeholders in June 2007.

2. Does the problems require a scientific answer?

Yes.

3. Have different stakeholder views been taken into account when framing the issues and questions to be addressed?

Yes. Stakeholder meetings were held in June 2007 (to agree Review remit and nominate panel members), and stakeholders were invited to raise issues directly with the Review Panel in October 2007 which coincided with a 6 week period to submit issues for the Panel's consideration.

Gathering and assessing the evidence

4. What steps have been taken to ensure that all available and relevant scientific evidence has been considered?

The Agency commissioned the team who developed the model at Oxford University to undertake a literature review to update the one undertaken in 2004 when the model was developed. An assessment was made of the nutrient profiling models which had been developed (on a worldwide basis) and whether these models were in use (and for what purpose). The review was peer-reviewed by 2 international experts on nutrient profiling.

The independent Review Panel considered the scientific process undertaken throughout the development of the model in 2004-05.

The Review Panel sought and considered evidence on appropriate methods for validation of nutrient profiling models from academic experts.

The Review Panel sought and considered the experience of industry on the development and use of nutrient profiling models.

The Review Panel sought and considered evidence from stakeholders on:

- The changes brought about by the implementation of the NP model which might have benefits to public health.
- How the NP model influenced industry broadcast advertising plans and/or product development.
- Practical issues arising from using the NP model.
- Suggestions for improvement of the NP model.

The Review Panel commissioned a package of scenario testing of potential modifications to the model and the impact of these modifications on a range of foods in order to address issues raised by stakeholders.

The Review Panel were kept informed of outputs from the Ofcom exercise to review the effect of the TV advertising controls on the balance of TV advertising of foods in core product categories to children and impact on broadcaster revenue.

5. Has the appropriate methodology been used?

The Review Panel assessed the effectiveness of the model at differentiating foods based on their nutrient composition by testing the effect of proposals for potential modifications to the model on a range of foods products and comparing the results to those for the existing model. The impact of the changes on classifications of foods were considered with respect to the public health objective to improve the balance of TV advertising of food to children as a tool within a wider Government strategy to protect the health of children and encourage healthy eating.

6. What is the strength of quantitative scientific evidence?

Relevant nutrient composition data from products currently on the marketplace were collated and used to assess the impact of the testing work. Nutrient composition databases used during the development of the model were also assessed to determine the impact of modifications together with data on product composition and reformulation provided by stakeholders during the consultation.

A wide range of foods were tested including foods which would not be expected to be advertised on TV during children's viewing times, but may be shown at family viewing times or in slots likely to be watched by parents.

7. Is the Qualitative evidence robust?

A literature review was undertaken by the team at Oxford University who developed the model at the beginning of the Review process to assess international developments in nutrient profiling and the level of validation for those nutrient profiling models. These findings were taken account of by the independent Review Panel.

Evidence provided by stakeholders on the application of the controls and its effect was also considered, such as information relating to adverts containing recipes or serving suggestions and brand advertising of meals.

8. Has the quantitative evidence been reviewed by statisticians?

FSA statisticians were involved in the data management and assessment, and provided a critical assessment of the impact of the modifications considered by the independent Review Panel.

9. If evidence was collected outside the UK, has the relevance to the UK situation been assessed?

The literature review collected information on NP models developed in other countries and how they had been derived and evaluated. All data was considered in context of review process. UK NP model was compared with work carried out in New Zealand to modify the FSA NP model to make it suitable for addressing health claims. The analysis was considered by an academic workshop.

The Review Panel were also kept informed of work being carried out by EU Commission to develop a NP model for nutrition and health claims.

10. Are the conclusions of the paper consistent with the quantitative and/or qualitative evidence, both in character and emphasis?

Yes. Analysis of the evidence base suggests that a change to the model (in line with the Panel's recommendations), would have a small impact on the classification of foods.

11. Is the scientific evidence base transparent to stakeholders and is it clear which evidence has been peer reviewed?

Yes. Minutes of all the Panel's meeting have been published on the Agency's website as have all the papers for the academic workshop have been published, which contained a significant amount of the evidence which the Panel has considered. The literature review was peer-reviewed and is published on the Agency's website. The consultation documents have been published. The consultation responses to the Panel's draft recommendations together with a commentary from the review Panel on the issues raised, including SACN's views will be published with the March 2009 Board paper.

Risk assessment

12. What are the facts underpinning the risk assessment? What are the assumptions?

Relevant nutrient composition data was collected and assessed where possible. Examples of advertisements for recipes, serving suggestions were considered by the Panel and were forwarded to BCAP and Ofcom who reviewed the guidance on the application of the model by Clearcast.

13. Has an assessment been made of likely impact and probability of occurrence?

Yes. The impact of each of the potential modifications considered by the Panel has been assessed with respect to a wide range of foods.

FSA asked Ofcom and BCAP to consider the impact of changing the way the NP model is applied to adverts featuring recipes.

14. Are all key scientific uncertainties highlighted? Has any indication been given about the degree of uncertainty or consensus indicated?

Yes. Uncertainties are related to the relevance of the nutrient composition data and the techniques used by advertisers to promote their products.

15. Are significant gaps in current evidence base noted?

Yes. Nutrient data for many take-away products was not readily available.

16. How have the areas of uncertainty been handled when reaching final conclusions and how do they impact on the advice?

A wide range of products have been tested including those foods frequently consumed by children. The Panel took into account the limitations of the databases used in drawing their conclusions. The Review Panel have recommended that if the model is modified that the impact of this modification on the advertising landscape should be assessed no sooner than 12 months after that modification takes effect.

17. Did the risk assessment consider the views of experts in all relevant disciplines, either as members of the committee or additional invited experts?

Yes. The Review Panel consists of experts in public health policy, nutrition, dietetics, nutrition policy and research, maternal and child nutrition and one member is also a member of SACN. The Review Panel was observed by DH, Ofcom and DCMS, who input into the Review at the request of the Panel.

The Review Panel sought input and advice from academic experts from the UK, EU and internationally.

The Review Panel sought the views of SACN before finalising its recommendations.

18. Is it clear how the conclusion is reached, based on the evidence presented to the committee? In particular, is the extent to which judgement has been used clear?

Yes. The Review Panel has systematically considered the evidence to determine the rationale for the protein cap and the impact of removing the protein cap from the model on a range of foods. The minutes of the Panel meetings reflect the judgements made throughout the review process.

19. Are there any other hypotheses which fit the same evidence? Have they been considered? Why were they rejected?

At the beginning of the review a range of potential modifications to the model were discussed and preliminary assessments made of their viability and justification. The Panel convened an academic workshop to seek the views of international and EU nutrient profiling and public health academics. The workshop participants considered the evidence on a range of issues and were in agreement with the Review Panel on which issues should be considered further. This work resulted in only one technical modification being pursued.

Based on the testing undertaken during the Review it was considered that the protein cap which had been included as a safeguard to mitigate against any possible risk that certain processed foods such as fast food products with particularly high levels of fat, salt or sugar available at the time the model was developed (2004-05), might be classified as 'healthier' products by virtue of their protein content, was not required.

20. How have conflicting views been taken account of? Have any risk assessments carried out by others been cited? To what extent are there consensus/differing views?

The Review Panel considered all consultation responses to the draft recommendations in detail. Assessments of the modification made by stakeholders were considered in detail, including an assessment of the evidence base used by stakeholders in coming to their conclusions. The outcome of the panels deliberations and responses to each of the issues raised has been documented and published on the Agency's website.

21. Has the Agency consulted on the draft conclusions/recommendations?

Yes. A 12 week public consultation was launched 7 July 2008.

22. Are the Panel's recommendations expressed in clear, simple terms, and can it 'stand alone'?

Yes.

Interpretation

23. Is the committee's advice correctly presented and represented in the Board paper?

Yes. The Chair of the NP Review Panel will also present the Panel's recommendations and rationale for them at the open Board meeting when the outcome of the Review proves is discussed (March 2009). The Board will have an opportunity to raise any questions or issues they have about the work with The Chair of the review Panel at the meeting.

24. Are any significant limitations clearly explained?

Yes. The Board paper will highlight the limitations associated with the nutrient composition data included in the test databases.

25. If this is a review, have external influences changed since the last consideration such that assumptions should have been challenged?

Yes. DH has completed its review of the advertising food to children landscape across all media (published in October 2008) and is now considering what further action to take on food promotions to children using non broadcast media. Ofcom published the interim findings from its review of the effect of the new TV controls in December 2008 and is expected to complete the work in 2010. Data available to-date suggests that the controls have reduced the amount of advertising of less healthy foods, and encouraged greater advertising of healthier foods. Industry concerns that advertising restrictions would impact upon quality programming has not been borne out. The EU Commission has been developing a NP model for use to control use of nutrition and health claims on food and is expected to publish its final model in January 2009. The Commission's proposed approach exempts a small number of food groups (including fruit and vegetables with no other added ingredients). It then establishes ten categories of foods – a generic group plus nine categories which represent the foods which contribute important nutrients to the diet. The food categories are:

- Non-alcoholic beverages
- Vegetable oils and spreadable fats
- Nuts, seeds or kernels
- Dairy products, except cheeses
 - Dairy products, except cheeses
 - Cheese
- Cereal and cereal products
 - Cereal and cereal products except breakfast cereals
 - Breakfast cereals
- Fruits, vegetables, and their products
- Meat and meat products
- Fish and fish products
- Ready meals

Thresholds for salt, saturated fat and sugar content are then established, on a per 100g basis, for each category; those for the generic group are more stringent than for the other groups.

The differences in outcome between the EU NP and FSA NP models are as follows: bread, whole milk, some cuts of meat and eggs fare less well under the EU model than the FSA model; and breakfast cereals and butters and margarines fare better. The proposed salt thresholds for breakfast cereals and spreads are also higher than current and/or proposed FSA salt reduction targets. We have asked the Commission to revise eggs and meat food groupings in order to relax

one or more of the nutrient thresholds for bread and milk, and to make thresholds for breakfast cereals and butters and margarines stricter. This would bring the expected outcome of the two models closer together.

26. Would it be helpful to have the advisory committee's view on whether (any of) the risk management options are consistent with the risk assessment?

No. The FSA NP model is a technical tool used for a regulatory purpose 'behind the scenes' and does not affect consumer messaging. For parents, categorisation of foods by the FSA model is not visible. Only foods which pass the model can be advertised in programmes popular with children, but children see many TV ads for foods which fail the model in family programmes where children are not over-represented in the audience.

27. If the issues falls between scientific advisory committees or to more than one, has a satisfactory mechanism been put in place to ensure that all players have been involved and that each committee is aware of the views of others?

The Review Panel presented its draft recommendations to SACN, supported by a summary of the review process together with the evidence considered and conclusions drawn. The Review Panel took account of SACN's views before finalising its recommendations.

28. If both risks and benefits were considered, are both addressed with the same rigour?

The Board paper will assess both the risks and benefits of accepting the Review Panel's recommendations in terms of delivery of public health policy in relation to the protection of children.

29. Has the committee indicated whether the evidence base is changing or static, and when it may need to be reviewed?

The Panel was alive to the fact that the evidence base is dynamic as products on the market are being continually reviewed and refreshed by the manufacturers and that the range and formulation of products are changed to meet market and customer needs. It is for this reason that the review was initiated one year from the date the new controls came into effect. The Review Panel recommend that if protein cap is removed the impact of this modification on the advertising landscape is assessed no sooner than 12 months after implementation.

30. Has a picture of the external environment been given so that the Board knows whether it needs to understand the context or educate consumers?

Yes. The Board paper will outline the history and development of the model and the reviews being undertaken by DH (changing trends in food promotion to children) and Ofcom (the effect of the advertising restrictions on 'less healthy' food promotion).

TIMELINE FOR THE REVIEW WORK

<u>DATE</u>	<u>DESCRIPTION</u>	<u>REFERENCE</u>
12/06/07	Stakeholder meeting to agree Review Remit and panel members.	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/nutprofilereview
20/09/07	NP Panel meeting	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/reviewmeet070920
15/10/07	NP Panel Stakeholder meeting to discuss stakeholder experience of NP.	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/pmp071015
24/09/07 – 05/11/07	Stakeholder opportunity to submit evidence to the Panel.	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/panelresponse
15/11/07	NP Panel meeting (including presentation from Mike Rayner on the lit review and validation on NP models).	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/npreviewmeet071115
09/01/08	NP Panel meeting	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/reviewpanel080109
28/02/08	Academic workshop on nutrient profiling	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/acwork/
13/03/08	NP Panel meeting	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/npreviewpanel080313
16/05/08	NP Panel meeting	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/npreview080516
07/07/08	Stakeholder meeting to launch consultation and media briefing	http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/npreviewpanelmeetings/npreview080707
07/07/08	Consultation documents	http://www.food.gov.uk/consultations/ukwideconsults/2008/nutrientprofiling
24/10/08	NP Panel meeting	Minutes and consultation responses not yet published. To be published at same time as March Board paper.
28/11/08	SACN discuss Panel's draft recommendations	Not yet published. To be published same time as March Board paper
18/12/08	NP Panel meeting	Minutes not yet published. To be published same time as March Board paper
Early Feb	Submission to MSPH on recommendations	
25/03/09	Board meeting	

NOTE: ANNEXES REFERRED TO IN SACN PAPER HAVE BEEN REMOVED DUE TO SIZE OF DOCUMENT



Paper for discussion: Recommendations of the Nutrient Profiling Model Review Panel

Agenda Item: 1

Action required

1. SACN members are asked to consider the Review Panel's conclusions and recommendations in relation to the effectiveness of the NP model at differentiating foods on the basis of their nutritional composition, in the context of Ofcom's television broadcast advertising controls.

Issue

2. In December 2005 the Food Standards Agency (FSA) recommended its nutrient profiling (NP) model to Ofcom for its use in broadcasting controls around the advertising of food and drink to children. At this time the FSA committed to reviewing the effectiveness of the model, one year from its first date of use.
3. Ofcom applies the NP model through rules that restrict advertisements for 'less healthy' food or drinks in or around television programmes for children, or programmes that are likely to be of particular appeal to children. These restrictions came into effect from 1 April 2007 for children aged 4-9 year olds, and from 1 January 2008 for children aged 4-15 years old. Dedicated children's channels have been allowed a graduated phase-in period, with full implementation required by the end of December 2008.
4. In September 2007 a Review Panel with independent members was convened, and tasked with making recommendations to the FSA on the effectiveness of the NP model in differentiating foods on the basis of their nutritional composition, in the context of Ofcom's UK broadcasting controls which seek to improve the balance of foods being advertised to children. Following an extensive review process and public consultation, the Review Panel has now agreed its draft recommendations:
 5. **The Review Panel considered the scientific basis for the protein cap and concludes that it should be removed from the nutrient profiling model.**
 6. **The Review Panel also recommends that not before a minimum of 12 months has passed following removal of the protein cap, the impact of this modification on the advertising landscape should be assessed.**
 7. **With removal of the protein cap, the Review Panel considers that the NP model is a scientifically robust tool that effectively differentiates food and drink products on the basis of their nutritional composition.**
8. The Review Panel is seeking views from SACN on whether it supports the Panel's conclusions and recommendations in relation to the NP model.

Background

Development of the Nutrient Profiling Model

9. The NP model was developed by researchers at the British Heart Foundation Health Promotion Research Group based at Oxford University. The process was guided by an expert group comprising nutrition scientists, dieticians, food industry and consumer organisation representatives and policy makers.
10. The model uses a scoring system which allocates points on the basis of a food's nutritional content per 100g⁸. Negative points are allocated for energy (based on energy density), saturated fat, total sugars and sodium. Positive points are scored for protein (as a proxy for calcium, iron and n-3 fatty acids), fibre, fruit, vegetable and nut content.
11. SACN was involved in the work carried out to develop the nutrient profiling model in 2004/2005 including:
 - SACN representation on the Expert group that guided the development of the model, this included the selection of indicator foods representative of the UK diet, that were chosen to test the model;
 - Responding to the November 2004 consultation on the preferred model;
 - SACN representatives attending the February 2005 academic workshop;
 - Discussing and agreeing the model refinements in a telephone conference call in September 2005.

The NP Model Review

12. The Panel members, objective and remit of the Review were agreed with stakeholders at the outset.
13. The objective of the Review of the FSA's NP model is to assess the effectiveness of the NP model in differentiating foods on the basis of their nutritional composition in the context of Ofcom's television broadcasting controls, which seek to improve the balance of foods being advertised to children.
14. The Review is being managed by a group of 7 independent experts (the Review Panel) chaired by Professor Mike Kelly (Public Health Excellence Centre Director, National Institute for Health and Clinical Excellence) and includes representation from SACN (Professor Annie Anderson)⁹.
15. On commencement of the Review the Panel commissioned a literature review of NP models and their intended purposes, to provide the Panel with an update on developments both nationally and internationally over the 4 years since the FSA's model had been developed.

⁸ The Agency's nutrient profiling model can be viewed at Annex B, page 4

⁹ Full details of the Review Panel's membership and remit can be found via:

<http://www.food.gov.uk/healthiereating/advertisingtochildren/nutlab/nutprofilereview/>

16. The Panel consulted stakeholders in September 2007 to identify any practical and technical issues arising from use of the model. A number of issues were raised, which ranged from the application of the model (e.g. stakeholders felt that the way the model is applied to recipe adverts should be changed), the scientific basis for the model (e.g. the model classified a nutritious food such as cheese as 'less healthy') and raised concerns that the model unfairly penalised whole categories of foods (e.g. breakfast cereals)¹⁰. All issues raised by stakeholders were considered by the Panel.

17. Of the issues raised, the following four were identified by the Panel as needing further consideration:

- The appropriateness of the base of the model (per 100g);
- The addition of specific food categories to the model;
- Application of the model to adverts featuring recipes or serving suggestions;
- The protein cap.

18. In February 2008 the Panel convened an academic workshop¹¹ to seek input from a wider field of expertise in the areas of public health and nutrient profiling. The workshop was attended by independent academics and professionals from the EU and international community, and focused on the four issues outlined above, together with presentations on validating NP models and the variability in children's food portion sizes.

19. Following break-out group sessions the workshop participants concluded that there was no advantage to changing the base of the model, and no justifiable nutritional argument for the addition of specific food categories. They also considered that the application of the model to advertisements featuring recipes or serving suggestions was complicated and warranted further consideration. The Panel shared these views.

20. Workshop participants concluded that the protein cap within the model should be considered further. Details of discussion on this issue can be found below.

The protein cap

21. Protein is included in the model as a marker for other important nutrients (calcium, iron and n-3 fatty acids).

22. The protein cap was incorporated into the model to prevent products that scored 11 or more 'A' points (points for energy density, saturated fat, total sugar and sodium) from being able to score 'C' points for protein, unless they contained >80% fruit, vegetable or nuts. This prevented foods with high energy, saturated fat, sodium or sugar levels, but also high in protein, from being classed as 'healthier' by the model unless reformulated.

¹⁰ A full list of issues raised in the consultation, and the Review Panels responses can be found at: <http://www.food.gov.uk/multimedia/pdfs/npresponses0710.pdf>

¹¹ A full report of the academic workshop can be found at: <http://www.food.gov.uk/multimedia/pdfs/npworkshop080228.pdf>

23. The Panel considered the rationale underpinning the basis for the protein cap and commissioned a package of scenario testing to determine the impact of raising the threshold at which the protein cap applies, or removing it altogether. This testing explored the impact of these scenarios on the following 6 databases of foods, details of which can be found at Annex A (Protein cap paper for academic workshop 28 February 2008):
- a. Indicator foods, selected by the 2005 Expert Group as being representative of UK diets (120 products);
 - b. Cheese and cheese products, from year 2 of the FSA Processed Food Databank (53 products);
 - c. Breakfast cereals, taken from retailer websites in January 08 (71 products);
 - d. Takeaway foods, from McDonalds and Wimpy websites, January-February 2008 (41 products);
 - e. 'Balance of Good Health' indicator foods, used in testing of the original model in 2004, chosen by NP researchers (93 products);
 - f. Processed foods, from year 2 of the FSA Processed Food Databank to represent a wider range of processed foods (380 products).
24. It was found that raising or removing the protein cap had only a small effect on the classification of foods in the databases tested. However, the scores of many foods were lowered so that they were brought closer to the boundary between 'less healthy' and 'healthier', and in doing so increased the opportunity for foods to be reformulated so that they could be reclassified as 'healthier' and be advertised during children's viewing times.
25. From this package of testing, the Panel noted that raising or removing the protein cap had the greatest effect on breakfast cereals. It resulted in a total of 16 out of the 71 breakfast cereals tested being reclassified from 'less healthy' to 'healthier' when the cap was raised to 15 points or removed altogether. This included 3 children's products, as per the Association of Cereal Food Manufacturers (ACFM) classification¹² (*Weetabix Weetos, Disney Pirates and Oatibix Bitesize*). Raising or removing the protein cap was found to have little effect on cheeses and resulted in no reclassifications from 'less healthy' to 'healthier'. Foods that did not change classification from 'less healthy' to 'healthier' but were brought close to the boundary between 'less healthy' and 'healthier' included takeaway cheeseburgers, chicken nuggets, jam doughnuts, ham and crisps (see Annex A).
26. Academic workshop participants considered background information on the protein cap and the outcome of the modification testing exercises indicated above. The participants concluded that removal of the protein cap would simplify the application of the model, but that careful consideration would need to be given to the effect on foods containing protein based ingredients through further testing.
27. In light of these views the Panel commissioned further work in March 2008 to assess the implications of raising or removing the protein cap on a wider range of foods, including foods frequently consumed by children. This is detailed at Annex B and contains datasets on:

¹²ACFM submitted information on breakfast cereals during the Oct/Nov 07 consultation exercise

- a. Foods frequently consumed by 3 year olds, identified from food diaries collected as part of the Southampton Women's Survey¹³ (48 products);
 - b. Fromage frais and yoghurts, from Sainsbury's and Tesco websites March 08 (25 products);
 - c. Cereal bars, from Sainsbury's and Tesco websites March 08 (12 products);
 - d. Children's ready meals, from Sainsbury's and Tesco websites March 08 (7 products);
 - e. Take away-type products, including chicken based and children's foods from Sainsbury's and Tesco websites, and KFC (USA) website March 08 (22 products).
28. Testing of these databases suggested that removal of the protein cap was unlikely to have a significant impact on the classification of the foods. It found that 3 products (Kettle lightly salted crisps, Kallo savoury snack rice cakes and Sainsbury's breadsticks) out of 114 products tested would be reclassified from 'less healthy' to 'healthier', and a further 3 (Marmite, Tesco fruit and fibre cereal bars and Goodies organic raspberry and apple cereal bars) would be brought closer to the boundary between 'less healthy' and 'healthier'.
29. The Panel also considered independent advice from SACN member Dr David Mela (Senior Scientist and Expertise Group Leader, Unilever Food and Health Research Institute (Netherlands)), and food scientist Dr Terry Sharp from Campden and Chorleywood Food Research Association, on the likelihood that manufacturers might add protein to foods to improve their NP scores and thereby allow foods to be advertised that previously would have been restricted. The Panel was advised this was unlikely, because protein is a relatively costly ingredient and technically difficult to add to foods in significant quantities whilst retaining quality and shelf life (see Annex B).
30. Having considered all of the available evidence on testing of the protein cap modifications, and noting the basis for it, **the Panel concluded that the protein cap should be removed**. In doing so, a food or drink which scores ≥ 11 'A' points (for energy, saturated fat, sugar and sodium) would no longer be prevented from scoring points for protein. In addition this would simplify the model and encourage reformulation.
31. The Panel also concluded that the issue of application of the NP model to advertisements featuring recipes and serving suggestions should be considered further by the FSA, the Broadcast Committee of Advertising Practice and Ofcom.

Consultation with stakeholders July-September 2008

32. In July 2008 these recommendations were put out to a 12 week public consultation. Comments and views received during the consultation were considered by the Panel at its meeting on 24th October 2008.

¹³ Data was provided by Siân Robinson (Review Panel member) from 400 2-day food diaries kept for 3-year old children (2002-2006). Foods that were eaten less than 20 times were excluded, as were fruits, vegetables and soft drinks like squashes & fizzy fruit drinks.

Consideration of evidence following the consultation

33. At its meeting on 24th October, along with the consultation responses, the Panel considered up to date nutrient composition data and the impact of removing the protein cap on the following product category databases (see Annex C):

1. Breakfast cereals (63 products), from manufacturer and retailer websites;
2. Cheese products (33 products) from Kraft website (Dairylea and Philadelphia);
3. Takeaway foods (65 products), from Sainsbury's and Tesco websites;
4. FSA Nutrient databank (200 products) 2000/2001; and
5. Crisps and snack products (45 products) from manufacturer and retailer (Sainsbury's and Tesco) websites.

34. Testing of these databases (except database 4) showed that since the previous testing had been carried out there had been changes in nutrient composition data, possibly from reformulation, in all of the product categories tested (crisps, breakfast cereals, cheese and takeaway foods). This had enabled a few more products to be classed as 'healthier' by the current NP model (with protein cap in place), and brought a number of other products closer to the boundary between 'less healthy' and 'healthier'. If the protein cap was removed, there would be a small increase in the number of products that would be classed as 'healthier', and in the number that would move closer to the boundary between 'less healthy' and 'healthier'.

35. The Panel noted the increase in the number of products that would now be classified as 'healthier' by the model with or without the protein cap and welcomed the positive action taken by the food industry to improve the nutrient content of their products.

36. The Panel also noted that where stakeholders had raised concerns about removal of the protein cap, these were prompted by the reclassification of some particular products from 'less healthy' to 'healthier', and not the scientific or theoretical basis of the protein cap.

37. The Panel reiterated that the protein cap should be removed from the NP model but acknowledged that the impact of this modification needed to be monitored. The Panel acknowledged concerns that some breakfast cereals with almost a third sugar content, were now eligible to be advertised during children's viewing times. However, the Panel noted that the major sources of sugar in children's diets were from sugary drinks and confectionery, which were classified by the model as 'less healthy'. The Panel agreed that the model did therefore represent an important step towards reductions in dietary sugars.

38. The Panel's recommendations:

The Review Panel considered the scientific basis for the protein cap and concludes that it should be removed from the nutrient profiling model.

The Review Panel also recommends that not before a minimum of 12 months has passed following removal of the protein cap, the impact of this modification on the advertising landscape should be assessed.

With removal of the protein cap, the Review Panel considers that the NP model is a scientifically robust tool that effectively differentiates food and drink products on the basis of their nutritional composition.

Action

39. SACN members are asked to consider the Panel's conclusions and recommendations in relation to the effectiveness of the NP model at its intended use, to effectively categorise foods on the basis of their nutritional composition, in the context of Ofcom's television broadcast advertising controls.

Next Steps

40. Subject to views from SACN, the Panel's final recommendations on the NP model will be presented to the FSA Board in March 2009.



Scientific Advisory Committee on Nutrition

AD HOC NUTRIENT PROFILING CONFERENCE CALL
28th November 2008, Aviation House, 125 Kingsway, London, WC2B 6NH

Minutes

Chairman	Professor Peter Aggett (via telephone)
Members	Professor Annie Anderson (via telephone) Dr Tony Williams (via telephone) Professor Ann Prentice
External attendees	Professor Judy Buttriss (Nutrient Profiling Review Panel)
Government Observers	Mrs Rosemary Hignett (FSA) Dr Alison Tedstone (FSA) Dr Karen Powell (FSA) Ms Julie Lucas (FSA) Dr Sheela Reddy (DH) (via telephone)
Secretariat	Ms Lynda Harrop (FSA)

Chair's welcome

1. The Chair welcomed Members and external attendees to this ad hoc meeting which had been called to discuss the recommendations of the nutrient profiling Review Panel. The Chair confirmed that although all SACN Members had been invited, the majority were unable to participate. Apologies were received from Professors Alan Jackson, Tim Key, Ian MacDonald, Peter Kopelman, Sheila Bingham; Doctors Anita Thomas, Paul Haggarty, David Mela and Mrs Stella Walsh and Mrs Christine Gratus.

Introduction and background

2. Professor Judy Buttriss from the Nutrient Profiling (NP) Review Panel presented a brief history on the development of the nutrient profiling model and an overview of how the NP model works. The main steps of the review process were outlined as being:
 - The Review Panel was set up in September 2007 and chaired by Professor Mike Kelly (Public Health Excellence Centre Director, National Institute for Health and Clinical Excellence), and included representation from SACN (Professor Annie Anderson).
 - In September 2007 the Panel consulted stakeholders to identify any practical and technical issues arising from use of the model. The Review Panel considered all the issues raised by stakeholders, with scenario testing where appropriate.
 - Four of the issues raised were identified by the Panel as needing further consideration. These were the 100g base of the model, the addition of categories, application of the model to adverts featuring recipes or serving suggestions and the protein cap.
 - Protein is used in the model as a proxy for calcium, iron and n-3 fatty acids. Following SACN's discussion of the NP model (paper SACN/05/27), a protein cap was introduced to prevent foods that were high in saturated fat, salt or sugars from passing the model by virtue of their high protein content.
 - The Review Panel hosted an academic workshop in February 2008 to seek input on these four issues from a wider field of expertise in the areas of public health and nutrient profiling. Workshop participants concluded that the application of the NP model to assess product recipes and serving suggestions and the use of a protein cap should be considered further.
 - The Review Panel commissioned further scenario testing to investigate the impact of raising the threshold at which the protein cap applies and removing it altogether on a wider range of foods, in particular foods that might be advertised to children. This demonstrated that very few foods moved from 'less healthy' to 'healthier'. There was also, in general, better discrimination within the breakfast cereal category.
 - The Review Panel considered independent advice on the likelihood that manufacturers might add protein to foods as a device to improve their NP scores, and hence enable them to pass the model.
 - Having considered all of the available evidence on testing of the protein cap modifications and arguments about the scientific rationale for its inclusion, the Review Panel concluded that the protein cap should be removed and these recommendations were put out to a 12 week public consultation in July 2008.
 - Comments and views received during the consultation were considered by the Review Panel at its meeting on 24 October 2008 along with an assessment of the impact of removing the protein cap on up to date nutrient composition data on a range of foods.

- The Review Panel was of the view that the protein cap should be removed from the NP model but acknowledged that the impact of this modification needed to be monitored.
- The Review Panel agreed that it would need to consider SACN's views on its draft recommendations before finalising them.

Review Panel's draft recommendations

3. Following the extensive review and consultation process, the Review Panel draft recommendations were:
 - The Review Panel considered the scientific basis for the protein cap and concludes that it should be removed from the nutrient profiling model.
 - The Review Panel also recommends that not before a minimum of 12 months has passed following removal of the protein cap, the impact of this modification on the advertising landscape should be assessed.
 - With removal of the protein cap, the Review Panel considers that the NP model is a scientifically robust tool that effectively differentiates food and drink products on the basis of their nutritional composition.

Members' views

4. SACN Members were informed that the purpose of the meeting was to obtain their views on the Review Panel's draft recommendations, in relation to the effectiveness of the NP model at its intended use; to differentiate foods on the basis of their nutritional composition, in the context of Ofcom's television broadcast advertising controls. The SACN Committee thanked Professor Buttriss for her clear exposition and asked her to relay its appreciation of the Panel's work to the Panel members.
5. The Chair asked Members for their views on the draft recommendations and the following points were raised in discussion:
 - Members agreed that the existing model was an effective tool for categorisation of foods on the basis of their nutrient composition.
 - Based on the testing undertaken by the Review Panel, Members agreed that removing the protein cap would have only a small effect on the number of foods that pass the model.
 - Members were not convinced that the application of the model was too complex for end users. Simplification by removing the protein cap would therefore not necessarily be a significant benefit to them.
 - There was concern from some Members that removal of the protein cap would mean that products with relatively high sugar levels, such as some breakfast cereals would be able to pass the model. There was also some concern that if the protein cap were removed, protein or fibre or both might be added to foods to improve their scores and pass the model.
 - There was concern from some Members that removal of the protein cap would permit one current variety of potato crisps to pass the model. If this product

were consequently advertised during children's viewing times, the purchasing of other much less healthy products of the same manufacturer could be stimulated by brand recognition and association.

- It was noted that a number of products had moved from being classed as 'less healthy' to 'healthier' during the course of the Review (under the current model). This indicated that further reformulation might enable additional products to pass the model in the future, regardless of whether or not the protein cap was removed. However, while the removal of the protein cap may result in a higher number of high sugar products passing the model, it may also encourage reformulations aimed at reducing salt, fat and sugar content.
 - Where possible monitoring of product reformulation should be undertaken.
6. It was noted that the Review Panel had received independent advice from SACN member Dr David Mela and Dr Terry Sharpe a food scientist from Campden and Chorleywood Food Research Association on the likelihood that manufacturers may add protein to improve NP scores. The Review Panel had been advised this was unlikely since protein is an expensive ingredient and is difficult to add without affecting the quality and shelf-life of a product. It was also informed that in some cases the nutrient composition data from retailer and manufacturer websites had been updated since January 2008 when original testing was conducted which may have accounted for some of the small changes in protein content of breakfast cereals.
7. Members agreed that if the protein cap were to be removed, the effect of this would need to be monitored, in order to identify any unintended consequences of this with particular reference to the sugar contents of foods which are able to pass the model, and the possible addition of protein to foods. It was agreed that such work should not be undertaken before 12 months after implementation of the change to allow time for reformulated products to appear on the market. It was noted that the FSA would be able to monitor the reformulation of products and their assessment by the modified NP model, and that children's consumption patterns are monitored as part of the FSA's rolling national diet and nutrition survey (NDNS) programme. Monitoring of product advertising is the responsibility of Ofcom and the Department of Health is responsible for monitoring advertising and promotion trends across all media.

Conclusion

8. In conclusion, the Committee agreed the following comments on the Review Panel's advice:
- Either with or without the protein cap, the NP model is an effective mechanism that differentiates food and drink products on the basis of their nutritional composition.
 - The protein cap could be removed from the model with limited impact on the classification of foods.

- Removing the protein cap would simplify the model, however SACN was concerned that the full impact of such a change is uncertain and it was not clear what benefits this would create.
- Members were concerned about the implications of reclassifying some foods from 'less healthy' to 'healthier'.
- If the protein cap were removed, the effect of this would need to be monitored for any unintended consequences for product composition, in particular to identify any addition of protein to foods in order to pass the model, not before 12 months after implementing the change.

Agenda item 2 – AOB

Next steps

9. The Secretariat confirmed that the draft minutes would be circulated to Members in attendance for finalisation before being considered by the NP Review Panel on 18th December 2008.
10. The Review Panel's final recommendations will be presented to the FSA Board in March 2009.
11. The Chair closed the meeting, thanking Members for their time and input on this issue over the past few months.

Meeting close

Final recommendations of the Nutrient Profiling Review Panel

1. The Review Panel considered the scientific basis for the protein cap and concludes that it should be removed from the nutrient profiling model.
2. The Review Panel concludes that the protein cap could be removed from the nutrient profiling model with limited effect on the classification of foods.
3. The Review Panel recommends that the impact of removal of the protein cap on the advertising landscape should be assessed no sooner than 12 months after implementation.
4. With removal of the protein cap, the Review Panel considers that the NP model is a scientifically robust tool that effectively differentiates food and drink products on the basis of their nutritional composition.

PROPOSED NUTRIENT PROFILING MODEL WITHOUT PROTEIN CAP

1. The Agency's nutrient profiling model is known as a 'simple scoring' system, where points are allocated on the basis of the nutritional content in 100g of a food or drink. There are three steps to working out the overall score for the food or drink:

Work out total 'A' points

2. Total 'A' points = (points for energy) + (points for saturated fat) + (points for sugars) + (points for sodium).
3. The following table shows the points scored depending on the amount of each component in 100g of the food:

Points	Energy (kJ)	Sat Fat (g)	Total Sugar (g)	Sodium (mg)
0	≤ 335	≤ 1	≤ 4.5	≤ 90
1	>335	>1	>4.5	>90
2	>670	>2	>9	>180
3	>1005	>3	>13.5	>270
4	>1340	>4	>18	>360
5	>1675	>5	>22.5	>450
6	>2010	>6	>27	>540
7	>2345	>7	>31	>630
8	>2680	>8	>36	>720
9	>3015	>9	>40	>810
10	>3350	>10	>45	>900

Work out total 'C' points

4. Total 'C' points = (points for fruit, vegetable & nut content) + (points for fibre [either NSP or AOAC]) + (points for protein).
5. The following table shows the points scored depending on the amount of each component in 100g of the food:

Points	Fruit, Veg & Nuts (%)	NSP Fibre (g)	Or AOAC Fibre (g)	Protein (g)
0	≤ 40	≤ 0.7	≤ 0.9	≤ 1.6
1	>40	>0.7	>0.9	>1.6
2	>60	>1.4	>1.9	>3.2
3	-	>2.1	>2.8	>4.8
4	-	>2.8	>3.7	>6.4
5	>80	>3.5	>4.7	>8.0

Work out overall score

6. Overall score = [total 'A' points] – [total 'C' points].
7. A **food** is classified as 'less healthy' where it scores **4 points or more**.
8. A **drink** is classified as 'less healthy' where it scores **1 point or more**.

WORKED EXAMPLE: BREAKFAST CEREAL (PROPOSED NP MODEL WITHOUT PROTEIN CAP)

100g of cereal contains:

Energy (kJ)	Sat Fat (g)	Sugar (g)	Sodium (mg)	AOAC Fibre (g)	Protein (g)	Fruit/veg/nut (%)
1434	0.2	21	450	12	14	0

Step 1 - work out the scores for the 'A' nutrients:

This breakfast cereal contains:

- 1434kJ energy per 100g, so it scores 4 points
- 0.2g saturated fat per 100g, so it scores 0 points
- 21g sugar per 100g, so it scores 4 points
- 450mg sodium per 100g, so it scores 4 points

So the total score for 'A' nutrients is: 4 + 0 + 4 + 4 = 12

Points ⇒	0	1	2	3	4	5	6	7	8	9	10
Energy (kJ)	≤335	>335	>670	>1005	>1340	>1675	>2010	>2345	>2680	>3015	>3350
Sat Fat (g)	≤1	>1	>2	>3	>4	>5	>6	>7	>8	>9	>10
Total Sugar (g)	≤4.5	>4.5	>9	>13.5	>18	>22.5	>27	>31	>36	>40	>45
Sodium (mg)	≤90	>90	>180	>270	>360	>450	>540	>630	>720	>810	>900

Step 2 - work out the scores for the 'C' nutrients:

This breakfast cereal contains:

- 14g protein per 100g, so it scores 5 points
- 12g AOAC fibre per 100g, so it scores 5 points
- 0% fruit/veg/nut content, so it scores 0 points

Points ⇒	0	1	2	3	4	5
Protein (g)	≤1.6	>1.6	>3.2	>4.8	>6.4	>8.0
AOAC fibre (g)	≤0.9	>0.9	>1.9	>2.8	>3.7	>4.7
Fruit/veg/nuts	≤40	>40	>60	-	-	>80

So the total score for 'C' nutrients is: 5 + 5 + 0 = 10

Step 3 - work out overall score:

Overall score = 'A' points minus 'C' points = 12 - 10

With an overall score of 2, this breakfast cereal would be classified as 'healthier' by the proposed NP model (without the protein cap).