



**Summary of original research from
December 2006 - June 2008 on consumer
preferences and use of Front of Pack
nutrition schemes**

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Background

In February 2007 the European Heart Network published a review of 'Front of Pack' nutrition schemes, which covered information up to and including November 2006¹.

Since then the European Commission has adopted a proposal for a Regulation on the provision of food information to consumers (COM(2008) 40 final)) to combine Directive 2000/13/EC on labelling, presentation and advertising with Directive 90/496/EC on nutrition labelling². The key relevant points contained in this are that:

- there would be a mandatory nutrition declaration on front of pack
- mandatory nutrients must be accompanied by an indication of the percentage of the reference intake value, but the proposal is silent on where these must be given
- voluntary national labelling schemes e.g. traffic light labelling of nutrients, would be permitted

Research on 'Front of Pack' labelling, particularly consumer perceptions and use, has continued, and this brief paper attempts to summarise relevant research carried out since December 2006. Information was collected by searching literature databases, Internet searches and through the European Heart Network, its members and contacts.

Main results

The research studies are listed in Appendix 1, and are organised by country. Information was obtained relating to France, Germany, Italy, The Netherlands, New Zealand, Norway, Slovenia, UK and the USA. The methods used, results and conclusions are tabulated.

Four main approaches to Front of Pack labelling have been investigated:

- Single healthy eating symbols to indicate which foods are the healthier choice e.g. tick, keyhole and heart symbols
- Traffic light labelling of nutrients ('traffic lights') where red, amber and green are used to indicate the levels of key nutrients
- Percent Guideline Daily Amounts ('percent GDAs') where the percentages of the Guideline Daily Amounts for key nutrients in a serving/portion or 100g of food are given (a Guideline Daily Amount is a dietary recommendation expressed in grams per day).
- A hybrid of traffic lights and percent GDAs, which provides information on the percent GDAs, and superimposes traffic light colour coding on to these.

¹ European Heart Network (2007) Review of 'front of pack' schemes. Available at: <http://www.ehnheart.org/files/FOP%20Report%202007-104826A.pdf> (accessed 2008).

² European Commission Provision of Food Information to Consumers - Proposed Legislation. Available at:

http://ec.europa.eu/food/food/labellingnutrition/foodlabelling/proposed_legislation_en.htm (accessed 2008).

The main results for each of these formats are given below.

Single healthy eating symbols

Key findings:

- There were minor differences in consumer preferences between the use of a symbol and more complex schemes e.g. traffic lights.
- Participants needed significantly less time to evaluate symbols compared to more complex schemes e.g. traffic lights.
- Although symbols were perceived as quick and simple to use, they give less information than traffic lights.
- In some systems symbols can be associated with more expensive foods, particularly if manufacturers have to pay in some way.
- Where this is the case lower price foods which do not carry the symbol of the type purchased by consumers with less money, can be seen as inferior and less healthy.
- Because symbols only appear on some foods, it is not evident whether those not carrying them do not qualify for the symbol in terms of health, or if the manufacturers have not applied to the scheme.
- Where symbols are used they benefit from being associated with a trusted authority, and providing more detailed nutrition information elsewhere on the pack.

Traffic lights

Key findings:

- Although traffic light schemes can be used 'at a glance', the entire assessment of an item often acted as a preliminary filter, with more detailed examination where necessary. This means that they can be seen as more complicated and time consuming than a simple symbol.
- Both traffic lights and simple symbols are seen as largely helpful by the majority of respondents. In Norway, when asked to pick their favourite, a majority, and particularly those with higher education and income, chose traffic lights.
- For lower income groups systems like traffic light labelling provide an easy to understand interpretation of nutrition labelling, which should be across as many foods as possible to maximise the benefits to this group i.e. mandatory.
- Traffic lights appear to raise the profile of nutrients that might not otherwise have received much of the consumer's attention
- In a poll in the UK, 76% of consumers correctly thought the red traffic light meant the food is high in something they should be cutting down on/keeping an eye on.

Percent Guideline Daily Amounts (Percent GDAs)

Key findings:

- Percent GDA schemes are seen as an improvement over the detailed ‘Back of Pack’ nutrition panel, but still had to be read and considered in some detail.
- With percent GDAs the consumer’s focus was less likely to be broadened outside of their immediate concerns to include other key nutrients
- Many participants do not use or understand GDAs and percent GDAs. In a poll in the UK only 35% of respondents understood that the GDA represents a maximum figure for salt, sugar and fat (41% in social class AB, and 29% in DE). 15% of people in DE class thought the figures were a minimum.

Hybrid model (traffic lights + percent GDAs)

This has been tested in Germany, and research is currently being carried out on it in the UK.

- In Germany 80% of consumers considered the model informative, comprehensible and easy to use, and 66% said that they would use the model when buying food.
- This model was recommended for use in Germany by the Federal Ministry on 30th May 2008.

Conclusions

There is consistent evidence that simple symbols are quick and easy to use for consumers. However, they report finding traffic lights almost equally helpful and these have the advantage that they can be applied across all foods, they provide more information than a symbol, and appear to enable consumers to evaluate foods for the range of nutrients which are key to current public health concerns. GDAs and percent GDAs by themselves are not well understood by consumers and may be misleading.

The findings from the recent research described in this paper support the European Heart Network’s recommendations that mandatory ‘Front of Pack’ labelling should be a colour coded banding scheme for key nutrients. This does not preclude the use of simple symbols as an additional element.

Appendix 1: Summary of original studies carried out on consumer understanding of ‘Front of Pack’ (FoP) nutrition schemes, from December 2006 to June 2008, in alphabetical order by country.

FoP = Front of Pack, BoP = Back of Pack

GDA = Guideline Daily Amount (the US equivalent is Daily Value (DV))

| Citation | Country /ies | Research Design | FoP schemes Tested | Detailed Food categories used (A) or only 2 or less (B) | Main Results | Conclusions |
|--|--|--|---|---|--|---|
| van Kleef E, van Trijp H, Paeps F & Fernandez-Celemin L (2008): Consumer preferences for front-of-pack calories labelling. <i>Public Health Nutr</i> 11, 203-213. | France Germany Netherlands UK | Eight variations of FoP calorie flags were designed and tested with consumers through qualitative research, for their preferences for each variation. | All schemes were only for calories. They ranged from simple to increasingly complex, including for example the amount of physical activity necessary to balance calorie intake from that product. | B | Calories were well-understood. Participants were generally positive about FoP flags, particularly if they are uniform across products. The most liked flags were the simpler ones depicting the no. of calories per serving or per 100 g. Some differences between countries were observed. Although participants were familiar with calories, they do not seem to fully understand how to apply them. | Highlighting energy on FoP is a promising communication, when supported by more detailed information on BoP |
| Feunekes GI, Gortemaker IA, Willems AA, Lion R & van den Kommer M (2007): Front-of-pack nutrition labelling: Testing effectiveness of different nutrition labelling formats front-of-pack in | Germany Italy Netherlands UK | Participants evaluated several products (healthier and less healthy variants of the same product category) with different FoP schemes. All assessments were done on-line, and used baseline measures for products without FoP labelling, followed by the products with FoP | The schemes ranged from those described as a) ‘simple’ that only indicate positive choices e.g. Healthier Choice Tick to b) ‘complex’ which provide both positive and negative | A | There were minor differences in consumer preferences between ‘simple’ and ‘complex’ schemes. Endorsement by national and international health organisations strongly increased credibility. Participants needed significantly less time to evaluate ‘simple’ compared to ‘complex’ schemes. There were minimal differences between countries in Study 1. | Simpler front-of-pack labelling formats seem more appropriate in a shopping environment where quick decisions are made. |

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| four European countries. <i>Appetite</i> 50, 57-70. | | labeling. Study 1, evaluated consumer preferences. Study 2 was only carried out in Italy and the UK, and measured the effect of formats on usage intention and time to evaluate products carrying different FoP schemes. | information on more than one nutrient e.g. multiple traffic lights. | | | |
| Federal Ministry for Consumer Protection - Germany (2008) Survey endorses "1 plus 4" model, Berlin. | Germany | Quantitative survey | Percent GDAs Traffic Lights, Hybrid model | B | <ul style="list-style-type: none"> - 80% considered the hybrid model informative, comprehensible and easy to use. - 66% said that they would use the hybrid model when buying food. - 55 % would be influenced in their food shopping by the use of colour, with red, yellow and green would represent high, medium and low levels | The hybrid model (traffic lights + percent GDAs) providing information on calories, fat, saturated fat, sugar and salt, was recommended for use by the Federal Ministry on 30th May 2008. |
| Signal L, Lanumata T, Robinson JA, Tavila A, Wilton J & Ni Mhurchu C (2008): Perceptions of New Zealand nutrition labels by | New Zealand | Qualitative: Six focus groups were conducted with different ethnic and low income groups. | Tick logo and variations Simple traffic lights Multiple traffic lights | B | Participants rarely use nutrition labels for a number of reasons, lack of time and understanding, shopping habits and relative absence of simple nutrition labels on low-cost foods. The tick logo was considered simple, but was not used because: it was not thought to be on low cost | For these groups there should be consideration of an alternative mandatory nutrition labelling system that uses simple imagery such as traffic lights. |

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| Maori, Pacific and low-income shoppers. Public Health Nutr 11, 706-713. | | | | | products, which by implication were inferior and less healthy, and this perception contributed to a sense of failure for participants. | |
| Norwegian Food Safety Authority (2008) Health labeling of food: series of reports including quantitative and qualitative research, and final recommendations. Oslo. | Norway | Study 1: Qualitative: 6 focus groups with 3 target groups (women from minority ethnic groups, consumers from lower and higher educational backgrounds). The work included an active shopping exercise. Study2: Quantitative: a web survey among a representative selection of the Norwegian Internet using adult population. | Traffic lights Health logos including, The keyhole, Sweden, The heart symbol, Finland, “Pick the tick,” Australia/New Zealand, | A + B | Study 1: A positive health logo enabled consumers to find quickly and easily healthy food products. The traffic light system was seen as more complicated and time consuming, and attitudes towards it were affected by consumers’ knowledge and interest in nutrition. Study 2: The health logo was perceived as quick and simple to use, but giving less information than traffic lights. Both the labels were seen as largely helpful by the majority of respondents. When asked to pick their favourite, a majority, and particularly those with higher education and income, chose the traffic light. | Both labels will work, and both labels will be of great help to consumers. Since all focus groups favoured the health logo, it was considered to be the preferred option. The Norwegian FSA has recommended the use of the keyhole on this basis. However, the Consumer Council of Norway recommends a traffic light system that provides information on sugar, salt and fat. |
| Recek M (2008) A View from the Slovenian Presidency (Member State, Industry and | Slovenia | Quantitative survey data | Semaphore systems (traffic lights) Percent GDAs | B | Only 17% of the respondents found current nutrition labelling understandable | The Slovenian Consumers’ Association supports traffic light labelling. Food industry support the percent GDA system. |

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| Consumer Perspectives on Front Pack and Nutritional Labelling) In <i>Food Labelling and Health Claims: 17th Annual European Food Law Conference</i> , Brussels. | | | | | | |
| Food Standards Agency (2007) Front of Pack Signpost Labelling Exploratory Research Report London. | UK | Qualitative: 8 discussion groups of 6-7 respondents each, with representation of men and women in pre-family, family and 'empty nester' life stages | Traffic Lights Percent GDAs | B | Traffic light schemes: could be used 'at a glance', and this meant that users felt that they had evaluated all of their signposted purchasing decisions, although the entire assessment of an item often acted as a preliminary filter, with more detailed examination where necessary; it seems likely that one effect of this type of scheme would be to raise the profile of nutrients that might not have received so much attention. Percent GDA / numerical only schemes: were seen as an improvement over the detailed nutrition panel, but still had to be <i>read</i> ; users of these schemes seemed more likely to look out for them on particular foods that | |

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| | | | | | might be high on nutrients of concern, e.g. calories or fats; the buyer's focus was less likely to be broadened outside their 'nutrients of concern', whereas less front of mind nutrients are more noticeably 'flagged' with traffic lights. | |
| forum (2007) Investigation of consumer understanding of sugars labelling on front of pack nutritional signposts, with specific reference to breakfast cereals. COI Communications & The Food Standards Agency. London. | UK | Qualitative: 12 two-hour discussion groups with consumers from a mix of socio-economic groups and life stages across the UK. In addition one-third of participants were recruited to take part in a follow-up telephone interview. | Traffic lights (to assess the most appropriate criteria for sugar). | B | Differentiation between added and fruit sugars should be included in front-of-pack labelling; nutritional information on cereals should be based on a standard reference amount and that this should be on dry cereal, as opposed to cereal plus milk; approximately 85% of self reported portions were greater than the manufacturers' recommended serving size | The boundary between amber and red in the traffic light criteria should relate to added sugars/100g. |
| TNS (2007) Front of Pack labelling survey. Food Standards Agency, London. | UK | Quantitative: Omnibus survey (weighted base n=2000) | Traffic lights Percent GDAs | B | Only 35% of respondents understood that the GDA represents a maximum figure for salt, sugar and fat (41% in social class AB, and 29% in DE). 15% of people in DE class thought the figures were a minimum. 76% correctly thought the red traffic light meant the food is high | The responses indicated that traffic light labelling is less likely to result in misinterpretations than percent GDA labelling. |

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| | | | | | in something we should be cutting down on/keeping an eye on (84% for AB classes, 70% for DE). Most of the remaining respondents thought that foods carrying a red light should not be eaten at all. | |
| | USA | Qualitative: 8 geographically diverse focus groups | Schemes relating to either food products or menu provision. Including: Nutrition Facts label and modifications of the keyhole symbol. | B | Provision of an icon on labels was seen as helpful, with more detailed nutrition information available for reference. The icon needed to be understandable and trusted. Many participants did not use or understand percent DVs (equivalent to percent GDAs) | Developing and branding an icon that signals more healthful products could help consumers make better food choices. |