

Introducing “activity equivalent” calorie labelling to tackle obesity



Key points

- Over two-thirds of adults in the UK are now overweight or obese
- Most common cause of obesity is consuming more calories than you burn off
- Food industry introduced nutritional labelling to aid consumers in making more informed choices
- Consumers spend, on average, 6 seconds looking at food before purchase and understand symbols better than numeric information
- Evidence suggests activity equivalent calorie labelling has the potential to help moderate calorie intake
- Almost two-thirds (63%) of people would support the introduction of activity equivalent calorie labelling
- Over half (53%) of people would positively change their behaviour after viewing front-of-pack activity equivalent calorie labelling
- After viewing activity equivalent calorie labels compared with current traffic light front-of-pack information, people were over 3 times more likely to indicate that they would undertake physical activity

Background

Over two-thirds of adults in the UK are now overweight or obese, ⁽¹⁾ and the trend is worsening, with 60% of men and 50% of women predicted to be obese by 2050.⁽²⁾ Obesity can have serious health consequences including heart disease, cancer and diabetes, and poor diet is a leading causal factor.⁽³⁾ Government cannot tackle such a ubiquitous problem alone, so it is vital that the food industry takes its share of the responsibility to empower the public to make healthier lifestyle choices, using a range of innovative and creative interventions, one of which could be activity equivalent calorie labelling.

The cause of obesity is excess energy consumption relative to energy expenditure, ⁽⁴⁾ but both genetic and environmental factors can contribute to its development. ⁽⁵⁾ Calorie expenditure (calories out) is the total amount of calories burned on a daily basis through natural metabolism and an individual's level of physical activity.

Increased physical activity is significantly related to weight loss, with those undertaking higher levels of physical activity for the same amount of energy intake likely to lose more weight. ⁽⁶⁾ Calorie consumption (calories in) is the total number of calories consumed through food and drink on a daily basis. When 'calories in' consistently exceeds 'calories out', an individual gains weight and increases their chance of becoming overweight or obese.⁽⁷⁾

Lack of physical activity is bi-directionally linked with obesity.⁽⁸⁾ Currently, 4 in 10 adults in England do not reach the recommended minimum physical activity guidelines.⁽⁹⁾ Research shows that a modest increase in physical activity could have significant health benefits for individuals. For example, a brisk 20 minute walk each day has the potential to lower a person's risk of premature death by between 16-30%.⁽¹⁰⁾ The food and drink industry is regarded by some as overplaying the importance of active lifestyles in the fight against obesity,

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deflecting attention from dietary factors. However, reducing and preventing obesity requires modifying both energy intake and energy expenditure, not simply focusing on either alone, ⁽⁴⁾ and this means that a focus on food and drink labelling could be valuable.

Physical Activity ‘Physical activity’ and ‘activity’ is any bodily movement that requires energy expenditure.
http://www.who.int/topics/physical_activity/en/

Detailed information on food labels is a relatively new concept. One of the first food labelling regulations in the UK was introduced in 1996, making it mandatory for all pre-packaged food to display information such as ingredients, product name, date mark, storage instructions and details of manufacturing.⁽¹⁰⁾ Since then, food labelling has evolved through European Union legislation and voluntary schemes.

As of 13 December 2011, European law unifies pre-existing directives on food and nutrition labelling into one piece of legislation (EU Reg 1169/2011), with a view to harmonising laws governing food packaging across all EU member states. The result is that all pre-packaged food sold within the EU must now provide consumers with a wide range of information including the name of the food, list of ingredients, Genetically Modified (GM) ingredients, weight, ‘best before’ or ‘use by’ date, storage conditions and allergen information, among others. However, article 35 of the EU regulation grants autonomy for member states to recommend further food information initiatives, in addition to standard front-of-pack information.

In 2006, basic voluntary front-of-pack information was recommended for 5 main nutrients by the UK Government and in June 2013, it launched the voluntary Front of Pack Nutrition Labelling Scheme. The scheme incorporates a person’s daily ‘Reference Intake’ (RI) information for energy, fat, saturates, sugar and salt in a ‘traffic light’ system - green indicating lower nutrient amounts and red indicating higher nutrient amounts, with amber in between. The aim of the scheme is to allow people to judge the energy and nutrient content of their food and be able to compare products to make healthier choices.⁽¹¹⁾ As of 2013, 23 food and drink companies and retailers were signed up to the UK Government’s Responsibility Deal scheme to commit to featuring traffic light labels on their products.

On average, consumers spend around 6 seconds looking at food before purchasing ⁽¹²⁾ and are most likely to look for total calories on food labels, rather than other forms of nutritional information.⁽¹³⁾ This means front-of-pack information should be quick to understand and utilise calorie information in a way that can positively influence behaviour change.

Consumer use of front-of-pack labels is relatively high. RSPH public polling shows that over half (56%) of people use front-of-pack labelling to decide what they purchase.⁽¹⁴⁾ This suggests front-of-pack labelling presents a good opportunity for public health interventions to positively change behaviour as many people use them to influence purchasing and consumption decisions. However, there is evidence to suggest some consumers find front-of-pack labels confusing due to ‘information overload’ ⁽¹⁵⁾ and that this confusion may be hindering some individuals from making healthier lifestyle choices.⁽¹⁶⁾

Although use of front-of-pack labels is high, there are concerns about its contribution to making diet and health inequalities worse. Those from lower socio-economic societal groups often have lower nutritional knowledge and health literacy.⁽¹⁷⁾ Information on food must be presented in a medium that can be understood by all sections of society, regardless of social class or economic situation. It is known that consumers understand symbols more easily than numeric information ⁽¹⁸⁾ which suggests activity equivalent calorie labels may provide an easier reference for people less able to decipher current front-of-pack labels.

Consumer literacy around calorie intake is also poor. Two-thirds of people do not know how many calories the average person needs to maintain a healthy weight.⁽¹⁹⁾ It is recommended that men consume 2,500Kcal and women consume 2,000Kcal on average per day to maintain a healthy weight – although other factors may influence this figure such as height, weight and age.⁽²⁰⁾ Therefore the provision of the calorie information without a clear interpretation of what this means – for example in terms of the energy that would need to be expended might limit the usefulness of such information to the public. The food and drink industry also advise consuming their products in the context of a healthy and active lifestyle, but do not provide an indication of physical activity equivalence which would relate to how the calories taken in from food could be expended through exercise or other forms of physical activity.

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While RSPH supports the provision of Reference Intakes, we believe that given the importance of calories both in the context of the obesity debate, and in recognising that this is information consumers tend to prioritise, food manufacturers and retailers could do more to improve calorie labelling making it more easily understood and relatable to people’s daily lives and activities.

One way this could be achieved is through displaying activity equivalent calorie information on food packaging, alongside current front-of-pack information, showing how much physical activity would roughly equate to the calories in the product. See figure 1 and 2 for examples.

Making shoppers more aware of the calories contained within high sugar content soft drinks in the context of activity equivalents has also been shown to reduce consumption.⁽²²⁾ Targeting unhealthy food products with such interventions that can positively influence behaviour change should be a priority if we are to counter the UK’s obesity trends.

Calorie equivalent activity labelling could also have the added benefit of reminding the public of the importance of being active, which has health and wellbeing benefits ranging far beyond maintaining a healthy weight. Physical activity is shown to boost self-esteem, mood,

sleep quality, improve energy levels and reduce the risk of stress, depression, dementia and Alzheimer’s disease.⁽²³⁾ RSPH’s own research has shown that activity equivalent calorie information has the potential to influence individuals to make healthier lifestyle choices. People were over 3 times more likely to indicate they would undertake physical activity after viewing activity equivalent calorie labels over current traffic light style front-of-pack information.⁽¹⁴⁾

The evidence to date suggests activity equivalent calorie labelling has the potential to provide the public with an alternative and useful calorie reference for food and drink, whilst simultaneously delivering the message of the need for physical activity as part of a healthy and balanced lifestyle. We would welcome more research into the efficacy of activity equivalent calorie labelling and the way in which it would be most effectively presented to consumers. This may be alongside current front-of-pack information, on the back of food packaging or through smart phone barcode technology.

Ultimately, the objective of activity equivalent calorie labelling is to encourage people to be more mindful of the calories they consume, how these calories relate to people’s everyday lives and to encourage them to be more physically active.



Figure 1: example of activity equivalent calorie labelling on packaging

Figure 2

| 10 calorie-dense food and drinks and their activity equivalence | | | | |
|---|------------------------|--|--|--|
| FOOD TYPE | CALORIES APROX. |  WALK OFF KCAL (medium walk 3-5mph) |  RUN OFF KCAL (slow running 5mph) | |
|  Sugary soft drink (330ml can) | 138 | 26 min | 13 min | |
|  Standard chocolate bar | 229 | 42 min | 22 min | |
|  Sandwich (chicken & bacon) | 445 | 1 hr 22 min | 42 min | |
|  Large Pizza (1/4 pizza) | 449 | 1 hr 23 min | 43 min | |
|  Medium mocha coffee | 290 | 53 min | 28 min | |
|  Packet Crisps | 171 | 31 min | 16 min | |
|  Dry roasted peanuts (50g) | 296 | 54 min | 28 min | |
|  Iced cinnamon roll | 420 | 1 hr 17 min | 40 min | |
|  Cereal (1 bowl) | 172 | 31 min | 16 min | |
|  Blueberry muffin | 265 | 48 min | 25 min | |

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