



POLICY BRIEF

SUMMARY

The food industry's voluntary Daily Intake Guide front-of-pack labelling scheme is not effective to guide consumers to healthier food choices. Research has found that the scheme is confusing for consumers, especially consumers with low literacy and from lower socio-economic groups. The scheme is not based on current recommended energy and nutrient intakes, may be misleading, particularly when used on children's products, may encourage people to aim to reach (rather than stay below) 'recommended' intake levels for unhealthy nutrients (e.g. sodium, saturated fat and sugar) and energy, and does not provide consumers with interpretive guidance about the healthiness of products. The Health Star Rating system provides interpretive labelling and renders the Daily Intake Guide unnecessary.

WHAT ARE DAILY INTAKE GUIDE LABELS?

In 2006, the Australian Food and Grocery Council (AFGC) introduced a voluntary front-of-pack labelling scheme, called the Daily Intake Guide (DIG), which is now used on the front of product packages by a number of Australian food manufacturers. Under the DIG scheme, labels on the front of packs indicate the percentages of an adult's average or recommended daily intake of energy and various nutrients that a product provides.

PROBLEMS WITH DAILY INTAKE GUIDE FOOD LABELLING SCHEME

The Australian government introduced the Health Star Rating System (HSRS) in June 2014. The HSRS is a voluntary front of pack labelling scheme, which was developed in consultation and by agreement with industry, public health and consumer stakeholders. The objective of the HSRS is to provide convenient, relevant and readily understood nutrition information on the front of food packaging to assist consumers to make healthier choices.

The HSRS uses a scale from half a star to 5 stars to rate the healthiness of similar products within a food category (based on nutrient profile scoring criteria). The graphic includes information on kilojoule, saturated fat, sugar and sodium content per 100g, and a single positive nutrient icon (e.g. relating to fibre or calcium) on the front of the pack.

Since introduction the HSRS has had significant uptake in certain product ranges¹ and consumer awareness and use of HSR are also increasing. There is also some evidence that the HSR encourages manufacturers to reformulate their products to obtain a higher star rating.²

Given that the HSRS has been in operation for over 3 years, there is no need for the DIG to continue to be used on packaging. Simplicity has long been one of the objectives of introducing the system. Multiple studies have demonstrated that consumers prefer the use of interpretive labelling, like the HSR system compared to reductive labels such as the DIG.³ The OPC believes that the DIG should no longer be permitted on the packaging as it only serves to confuse customers who prefer uniform labelling across all food packages.⁴

WHAT ARE THE PROBLEMS WITH DIG LABELS?

The OPC supports implementation of the agreed HSRS without DIG labels. The OPC has significant concerns about the DIG scheme because it is difficult

to understand and use, and may mislead consumers about the healthiness of packaged foods.

1. DIG labels are confusing, difficult to interpret and rarely used

There is a lack of independent scientific research to support the effectiveness of DIG labels.

Numerous studies conducted in Australia and overseas have found that consumers find the DIG and other similar schemes confusing and difficult to interpret,⁵ especially consumers with low levels of literacy.⁶

A 2008 study by a collaboration of public health groups in Australia (including the OPC) found that DIG schemes are not as well understood by consumers as interpretive labelling systems (e.g. multiple traffic light labels or the HSRS) which provide consumers with interpretive guidance about the healthiness of the product. This study also found that consumers from lower socio-economic groups have particular difficulty using the DIG scheme (but not other front-of-pack schemes, such as multiple traffic light labels).⁷

The 2011 national Review of Labelling Law and Policy noted that the DIG scheme is confusing for consumers, particularly problematic for consumers with low levels of literacy, and 'challenging for consumers to use...in the context of their daily diet'.²

Many consumers are likely to find it difficult to understand the DIG scheme's percentage values, and to keep track of and add the percentages they have consumed from various products over the course of a day. A UK survey found that almost half (47%) of adults have difficulty using simple percentages.⁸

In addition, CHOICE research indicates that most Australians have never heard of the DIG scheme. The CHOICE survey found that 62% of consumers surveyed had never heard of the scheme, or at best rarely use it to choose food products, and 62% of those surveyed would support the HSRS replacing the DIG scheme.⁹

2. DIG labels are not based on current recommended intakes

The DIG scheme is based on a daily energy intake of 8,700 kilojoules. This intake level is based on average actual energy intake for adults in Australia in 1995, and New Zealand in 1991.¹⁰ It is not, and has

never been, a recommended level of kilojoule intake for average adults. The 8,700 kilojoule intake level is unlikely to reflect the current average energy intake level of Australian consumers or the appropriate intake for an average consumer. It is also not an appropriate guide for consumers with lower or higher energy needs, such as children or older people.

In addition, DIG nutrient labels are based on recommended daily intake values for nutrients published in 1991 and no longer reflect current scientific evidence. New Nutrient Reference Values for Australia and New Zealand were released in 2006 by the National Health and Medical Research Council, replacing the previous Recommended Dietary Intakes. However, these new values have not yet been included in the Food Standards Code.* Consequently, the DIG scheme is based on out-of-date values.

This is particularly significant in relation to sugar. The DIG labels for sugar are based on an adult's recommended maximum daily intake of 90 grams of sugar per day, equating to a contribution of 17.5% to total daily kilojoule intake (1,522 kJ). This figure is understood to represent the mid-point of the NHMRC's recommendation for the contribution of sugar to energy in the adult diet of up to 15-20%, which was made in 2003.¹¹ More recently, the NHMRC *Australian Dietary Guidelines 2013* have cautioned that children and adults should limit their intake of food and drinks containing added sugar. The WHO's guidelines on sugar consumption now recommend that added sugar intake be restricted to less than 10% of a person's energy intake and to 5% for the best health outcomes.¹² The discrepancy between the information on which the DIG labels are based and current government recommendations compounds the potential for DIG labels to mislead, as consumers may (wrongly) assume that the reference value is consistent with current recommendations of peak health bodies.

3. DIG labels are not based on recommended intakes for all persons

The DIG scheme is supposed to be based on the energy and nutrient needs of an average consumer, but people's energy and nutrient needs vary widely according to factors such as age, gender, weight, illness factors and activity levels. The scheme may

* Food Standards Australia New Zealand undertook consultation in 2010 on including the 2006 Nutrient Reference Values in the Food Standards Code but this had not yet occurred.

lead people to underestimate the proportion of energy and nutrients particular foods contribute to their diets, and to consume more than they require.

4. DIG labels use adult reference values for children's products

In particular, DIG labels are often used on products aimed at children, despite the fact that the DIG reference values are based on an average adult's daily energy and recommended nutrient intakes and are not suitable for children. For example, DIG labels using adult reference values appear on Uncle Toby's Roll-Ups, Kellogg's LCMs, and a range of snack size potato chips that appeal to children.

Adults' energy needs are vastly higher than those of children, particularly young children. For example, estimated energy requirements per day for 5-year-olds are 2,500 kilojoules for boys and 2,300 kilojoules for girls.¹³ This means that DIG values grossly underestimate the contribution that products make to children's requirements.

Consequently, the DIG scheme may lead parents to overestimate children's energy needs and underestimate how much energy products contribute to these needs, resulting in children consuming more energy than they require. This is of serious concern when 27% of Australian children are overweight or obese.¹⁴

5. DIG labels are based on variable serving sizes

DIG values are based on variable serving sizes that are set by manufacturers. This has the potential to mislead consumers in relation to the energy value and nutrition content of products containing multiple non-fixed serves, such as breakfast cereals, as manufacturers are able to base values on smaller than realistic serving sizes so that products appear to make a smaller contribution to recommended daily intakes of energy, fat, sugar and/or salt (e.g. recommended serving sizes for some breakfast cereals are 30g and for others are 45g).

6. DIG labels use inconsistent reference values

Under the scheme, manufacturers may choose to display DIG information for energy only (and not for any core nutrients) if label space is limited or the product is low in all core nutrients. For other products the 'preferred option' is to display DIG information for fat, saturated fat, sugar and sodium, but this is

optional. This means that consumers relying on energy-only DIG labels may base food decisions solely on energy content. This should not be the sole criterion for food choices because products of low nutritional quality may have energy contents that are the same or lower than products of high nutritional quality (for example, a can of cola may contain fewer kilojoules than a carton of reduced-fat chocolate milk and white bread may contain the same number of kilojoules as wholegrain bread).

7. DIG labels do not distinguish between upper and lower limits of nutrients

The scheme does not distinguish between upper limits of nutrients, which consumers should aim to stay within (e.g. levels of fat, salt and sugar), and lower limits of nutrients, which consumers should aim to exceed (e.g. levels of fibre). The scheme may mislead consumers to believe it is necessary for good health to reach 'recommended' targets for particular nutrients, when in fact, consumers should try to minimize their intake. For example, only a limited amount of saturated fat should be consumed as part a healthy diet; however, the DIG system may imply that consumers should aim to consume the 'recommended' daily intake of saturated fat. (Signposts for fat, saturated fat, total sugars and sodium display small asterisks, linking to the statement 'moderate your intake' on the back of food packs. However, the asterisks and the statement are printed in tiny font and are barely visible to the naked eye.)

8. DIG labels do not provide interpretive guidance

The DIG scheme used alone does not provide any interpretive guidance as to whether levels of energy and nutrients in the product are high, medium or low, and whether a product is a healthy choice overall. It is likely to be difficult for consumers to keep track of the proportion of the recommended daily intake of each nutrient they consume during the day, and ensure they do not exceed the recommended intakes. As discussed above, research indicates that consumers find DIG schemes confusing and difficult to interpret, and not as easy to understand as interpretive schemes.³ When DIG labels are used in conjunction with the HSRS, the HSRS provides interpretive information about products' overall healthiness. However, the OPC believes the DIG labels are unnecessary and superfluous, and may confuse and/or mislead consumers for the reasons



discussed above, undermining the value of the HSRS scheme.

MORE INFORMATION

For information about the problems with Guideline Daily Amount labels in Europe (the equivalent of DIG labelling in Australia), see: Lobstein T, Landon J, Lincoln P. (2007) *Misconceptions and misinformation: the problems with Guideline Daily Amounts (GDAs)*, National Heart Forum: London.

About the Obesity Policy Coalition

The Obesity Policy Coalition (OPC) is a coalition between the Cancer Council Victoria, Diabetes Victoria, and the Global Obesity Centre at Deakin University, a World Health Organization Collaborating Centre for Obesity Prevention. The OPC advocates for evidence-based policy and regulatory change to address overweight, obesity and unhealthy diets in Australia.

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REFERENCES

1. Health Star Rating Advisory Committee Health Star Rating System-June 2014–June 2016. 2017,
2. Ibid
3. Pettigrew S, Talati Z, Miller C, Dixon H, Kelly, B and Ball, K, The Types and aspects of front of pack labelling schemes preferred by adults and children, *Appetite*, 109 (2017) 115-123
4. Kelly B et al, Consumer testing of the acceptability and effectiveness of front-of-pack labelling systems for the Australian grocery market, *Health Promotions International*, 2009 Vol 24 No 2 p126
5. Review Panel. Labelling logic: review of food labelling law and policy. Canberra: Commonwealth of Australia. 2011. [http://www.foodlabellingreview.gov.au/internet/foodlabelling/publishing.nsf/content/48C0548D80E715BCCA257825001E5DC0/\\$File/Labelling%20Logic_2011.pdf](http://www.foodlabellingreview.gov.au/internet/foodlabelling/publishing.nsf/content/48C0548D80E715BCCA257825001E5DC0/$File/Labelling%20Logic_2011.pdf) (accessed 11 April 2011) Kelly B, Hughes C, Chapman K, Louie JC, Dixon H, Crawford J, King L, Daube M, Slevin T. Consumer testing of the acceptability and effectiveness of front-of-pack food labelling systems for the Australian grocery market. *Health Promotion International*, 24(2), 2009, 120-9. Food Standards Australia New Zealand. Technical report: consumer research on percentage daily intake – qualitative research into the interpretation of %DI and %RDI labelling. Report prepared by TNS Research, Canberra: FSANZ, 2007.
6. Viswathan M, Hastak M, Gau R. Understanding and facilitating the usage of nutritional labels by low-literate consumers. *Journal of Public Policy and Marketing*, 28(2), 2009, 135-45.
7. Kelly B, Hughes C, Chapman K, Louie J, Dixon H, and King L. (On behalf of a collaboration of public health and consumer research groups) *Front-of-Pack Food Labelling: Traffic Light Labelling Gets the Green Light*. Sydney: Cancer Council, 2008, <http://www.cancerCouncil.com.au/editorial.asp?pageid=2456> (accessed 21 January 2010)
8. UK Department for Education and Skills. 2003. *The Skills for Life Survey*. London: The Stationery Office
9. CHOICE. Media release: Food industry failure on front-of-pack labelling: poll shows consumers reject industry's Daily Intake Guide, 12 December 2013
10. Australian Bureau of Statistics. *National Nutrition Survey: Selected Highlights Australia 1995*. Australian Bureau of Statistics, Canberra, 1998; Horwarth C, Parnell W, Birbeck J, Wilson N, Russel D and Herbison P. *Life in New Zealand Survey Commission Report: Volume VI. Nutrition*. University of Otago, Dunedin, 1991.
11. 'NHMRC *Dietary Guidelines for Australian Adults*, 2003, at 186
12. Available at <http://www.who.int/mediacentre/news/releases/2015/sugar-guideline/en/>
13. COAG Reform Council. *Healthcare 2011-2012: Comparing performance across Australia. Report to the Council of Australian Governments*. COAG Reform Council, Sydney, 2013
14. Australian Government. National Health and Medical Research Council website. Dietary energy. <http://www.nrv.gov.au/energy.htm> (accessed 12 December 2013).