

## Traffic Light Food Labelling – The Evidence

### The problem of obesity

Concerns about the implications of obesity are not new. Recent estimates suggest that 2 billion people worldwide are either overweight or obese (Swinburn et al, 2011). The 2007-08 National Health Survey (ABS, 2009) found 37 per cent of Australian adults to be overweight and a further 25 per cent were classified as obese. Data from the 1995 National Nutrition Survey (ABS, 2007) found that 64 per cent of adult males were either overweight or obese. By 2007-08 this had risen to 68 per cent. For adult females, 49 per cent were identified as overweight or obese in 1995, increasing to 55 per cent by 2007-08.<sup>1</sup> Self reported Body Mass Index from the National Health Survey shows a steady increase in overweight and obesity from 50 per cent in 2001, 54 per cent in 2004-05 and 56 per cent in 2007-08.<sup>2</sup> Those groups within the population that have the highest rates of overweight and obesity have also put on disproportionately more weight (Walls et al, 2010).

The OECD's Health at a Glance 2011 Report places Australia's rate of obesity fifth highest (behind the US, Mexico, New Zealand, and Chile) out of forty countries.

The proportion of Australian children who were overweight, almost doubled between 1985 and 1995 (Margarey, Daniels & Boulton, 2001). Results from the 2007 Australian National Children's Nutrition and Physical Activity Survey (CSIRO, 2008) found that 23 per cent of children aged 2 – 16 years were overweight or obese (17 per cent were overweight, and a further 6 per cent were obese). This situation is particularly concerning as children who are overweight or obese are more likely to be obese in adulthood and have an increased risk of developing associated health conditions (AIHW, 2004).

In Australia, there is an increased prevalence of overweight and obesity among certain population groups, including people from low socio-economic backgrounds, people with lower levels of education, Aboriginal peoples and Torres Strait Islanders, people from different cultural backgrounds, and people born overseas (National Preventive Health Taskforce, 2009). Along with a range of psychosocial impacts, it has been established that people who are overweight or obese have an increased risk of physical health problems including cardiovascular disease, high blood pressure, type 2 diabetes, sleep apnoea, and osteoarthritis (WHO, 2000). Once established, obesity can also make the management of these conditions more problematic (AIHW 2010). In 2009 the World Cancer Research Fund and American Institute of Cancer Research issued an expert report that confirmed that excess body fat increased the risk of cancers of the bowel, oesophagus, pancreas, kidney, endometrium and breast (in postmenopausal women).

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<sup>1</sup> While data on overweight and obesity has been collected more frequently the 1995 National Nutrition Survey and the 2007-08 National Health Survey included a verified measurements.

<sup>2</sup> These numbers are different because they rely on self reported BMI. People are more likely to underestimate their body weight, this problem is likely to increase as a person becomes heavier.

Research commissioned by the Australian National Preventive Health Taskforce indicates that if current trends in overweight and obesity in Australia continue, there will be approximately 1.75 million deaths in those aged over 20 years between 2011 and 2050 (Gray & Holman, 2009).

The social and economic costs of obesity in Australia are already significant and will continue to grow. These costs include direct financial costs to the health system (such as costs for hospital treatments, general practitioner consultations and pharmaceuticals), indirect financial costs (such as carer costs and productivity losses), and non-financial costs (such as loss of wellbeing and premature death). Access Economics has estimated that the total financial costs of obesity in Australia in 2005 was \$3.767 billion, including \$873 million in direct costs to the health care system. While some of this costs is passed on to individuals, friends and family members, 37 per cent ( or \$1.4 billion) was borne by the Federal Government, and another 5 per cent by State Governments (Access Economics, 2006).

#### Factors that contribute to obesity

The underlying causes of overweight and obesity are complex. Individuals' dietary behaviour and levels of physical activity are the immediate determinants of weight gain. While these determinants can be influenced by a range of factors (including cultural norms, social trends, economic circumstances, information and technological environments, market forces, occupations and physical infrastructure), a strong global correlation has been observed between obesity and changes in the food supply system, which is producing food products that are more processed, more affordable and more effectively marketed than ever before (Swinburn et al, 2011).

Further, research comparing US food energy supply data from the 1970s and 2000s indicates that increased energy intake was sufficient (by itself) to explain increases in body weight (Swinburn, Sacks & Ravussin, 2009). A paper prepared for the National Bureau of Economic Research (Bleich et al, 2007) supports the argument that increased energy intake is the driving force behind the obesity epidemic (also noting that the decline observed in physical activity is too small to explain the rise in adult obesity).<sup>3</sup> Tackling rising levels of obesity must therefore include a very strong focus on improving patterns of food and drink consumption, and an essential part of this will include informing and empowering consumers to purchase the healthiest or healthier food options (Carter, Mills & Phan, 2011).

Part of the problem is likely to be that people have become busier and less engaged with growing and preparing foods, and as a result are more dependent on processed and pre-prepared foods (Blewett et al., 2011). This change in diet means people are consuming more energy overall, as well as increased amounts of salt and saturated fats (ABS, 2007). Given that highly processed foods can contain high amounts of salt, saturated fats (and sugars) some people may be consuming very large amounts of these nutrients without being aware of it.

Both the Australian National Preventive Health Taskforce (2009), and the Review of Food Labelling Law and Policy (2011) have argued that Australia's response to overweight and obesity must include changes within the food supply system in order to increase the demand for

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<sup>3</sup> It is worth noting that in this paper Australia, and Finland were noted as exceptions to this trend, the authors suggested that this was most likely because of 'unreliable' data around caloric supply measures.

and availability of healthier food products (resulting in decreases in the demand and availability of unhealthier food products). In order to help drive this change, Australian consumers must be provided with easy to understand information about the content of food and drink products, including information that is relevant to health.

#### Tackling the problem of food consumption

When making a purchasing decision, consumers are faced with a large number of options within a product category. Food labels compete with a wide range of other factors including price, taste, health claims and brand name. For the food industry, food labels provide a marketing platform to highlight some advantage of their product over the other similar products on offer.

It has been estimated that consumers spend between four to ten seconds choosing a product from the supermarket (Lobstein & Davies, 2011). While this may not seem like very long, when multiplied by the number of items in a weekly or fortnightly shopping trip it can become unmanageable. One third of consumers surveyed reported that they lacked the time to read food labels (FSANZ, 2008).

In Australia most packaged food and drink is required to display the Nutrition Information Panel (NIP). The NIP provides information on energy, protein, total fat, saturated fat, carbohydrate, sugars and sodium, in both per serve and 100gm / ml measures. The NIP also includes a listing of ingredients, and may also provide allergen information. Consumer research conducted by Food Standards Australia and New Zealand in 2003 found while many people reported at least partly understanding nutrition labels, in reality the actual understanding was quite poor.

The NIP is not usually placed in a prominent position on the product label and text can be small, particularly on small packages. While the information provided on the NIP is undoubtedly important, research suggests that many consumers find it too technical and difficult to understand (Mhurchu & Gorton, 2007). The presentation of the NIP has received considerable attention, as consumers have found it confusing, if not misleading (Blewett et al., 2011). Research has highlighted problems around providing information based on serving sizes that do not reflect consumption patterns (Schwartz & Byrd-Bredbenner, 2006). The small font size may also contribute to the perceived difficulty. Food labels that contain too much information may overwhelm consumers, resulting in less of an effort to locate the desired information or may even cause people to ignore the information altogether (Malam et al., 2009).

A key challenge is to achieve the right balance between providing information to consumers which is accurate and comprehensive about product content but which is also accessible and facilitates consumers' judgements in identifying a healthier or the healthiest product. The information about the product needs to be easily identifiable and useable within a short time frame.

#### Improving food choices – the importance of Traffic Light Labelling

Australian consumers have indicated their preference for the introduction of a single approach to front of pack labelling (Kelly et al., 2008) (Sanitarium, 2011). Front of pack food labelling provides simple, easy to interpret and compare information about a food or drink product on the front of the product package. Front of pack labelling recognises that many consumers are time

poor but would like to make informed choices about their food and drink purchases. Front of pack labelling also conveys immediate information to those consumers who wouldn't normally consult food labelling before purchasing.

#### PERCENTAGE DAILY INTAKE

One approach to front of pack labelling is the Percentage Daily Intake (%DI) system. This system provides monochrome 'thumbnails' that indicate the contribution of energy, protein, total fat, saturated fat, total carbohydrate, sugar and sodium provided by the serve of food as a percentage of the daily recommended intake (based on the estimated nutrient intake for a 70kg adult male). This approach is promoted by representatives of the food industry and has been voluntarily adopted by a number of food producers. Consumer perceptions about %DI labelling are mixed. This may be related to the tendency for consumers to perceive products to be healthier, or preconceived ideas about a product's healthiness when labelled with the %DI (Kelly et al, 2008).

According to an unpublished survey conducted on behalf of Australian Food and Grocery Council (AFGC), the majority of people who were surveyed haven't used the %DI system to make a decision. Research conducted by the food producer Sanitarium (2010) shows the %DI system to be the least preferred, understood and useful approach to front of pack food labelling. This may be especially so for people who come from culturally diverse or disadvantaged backgrounds (Gorton et al., 2007).

Nominated serving sizes are not always consistent or realistic. Providing information based on a per serving basis may allow for serving sizes to be manipulated in order to display lower percentages. Another key concern with providing percentage for daily intakes is that it implies a goal (of % per cent) for consumption rather than encouraging any reductions (Carter, Mills & Phan, 2011). This goal is based on the intake for a 70kg male, which adds to the confusion and can be particularly problematic when products aimed at children are labelled with percentages based on adult male intakes.

More recently the %DI system has been downsized with increased use of a single 'thumbnail' on energy content alone. While it is important that front of pack labelling is simple and easy for consumers to interpret, the provision of a single piece of information may in fact be overly simplistic and even misleading when other nutrient levels such as salt are high. Recent research on this single 'thumbnail' system has shown that consumers find the information to be too abstract to be meaningful (energy alone is highly ambiguous), and the small size of the display unnoticeable (Carter, Mills & Phan, 2011).

#### TRAFFIC LIGHT FOOD LABELLING

An alternative approach to providing simplified front of pack labelling, is the Traffic Light Labelling system. This system of labelling uses red, amber and green signals to show consumers, at a glance, whether a product is high, medium or low in fat, saturated fat, sugar, salt (and possibly overall energy), making it easy to identify healthier food choices by choosing

products with green or amber lights, rather than red. The calculations around what colour traffic lights are displayed on any given products are standardised.<sup>4</sup>

Research has shown that the Traffic Light approach has many benefits and advantages over other approaches. Research undertaken in Germany and the UK show that Traffic Light Food labels enhance the ability of consumers to identify healthier options on packaged foods (Borgmeier & Westenhoefer, 2009). These findings have been replicated in Australia. Australian consumers could accurately identify whether there was high, moderate or low amounts of nutrients in a given product when using the Traffic Light Food Labelling system (Kelly et al, 2008). By providing information through colours, Traffic Light Food labelling appears to reduce the cognitive workload for the consumer, making the identification of healthier food options easier.

Consumers using Traffic Light Food Labelling have been shown to be five times more likely than those using % DI to identify healthier choices when two similar products were compared. In the same study, consumers also reported that Traffic Light Food Labelling allowed them to compare products faster (at a glance) than when using %DI (Kelly et al, 2008).

Importantly, these benefits are consistent across people from various backgrounds. Research has shown that Traffic Light Food Labelling commands high levels of understanding and acceptance across ethnic and income groups (Gorton et al., 2007) which is consistent with the Food Regulation Ministerial Council Front of Pack Labelling Policy Statement (2009).

The Traffic Light Food Labelling approach does appear to inform consumer choice and increase demand for healthier product. Following the introduction of Traffic Light Food Labelling in the UK, sales of breakfast cereals with mainly green or amber lights grew twice as fast as breakfast cereals in total and pre-prepared frozen meals with red lights have experience a 35% decrease in sales (Gill, Chun Yu & King, 2011).

As Traffic Light Food Labelling will benefit the entire population and has relatively low implementation costs, it is regarded as one of the top three policy interventions for obesity in a recent article published in The Lancet (Gortmaker et al. 2011).

It is essential that any new approach to food and drink labelling is accompanied by a comprehensive and well-targeted nutrition education program that is consistent with current dietary guidelines. Red lights will not mean that the food or drink product should never be consumed, but rather that it is not a product that should be consumed regularly. In the same way, products with green lights will not mean that excessive amounts can be consumed without any impact.

## IMPLEMENTATION

A range of overweight and obesity interventions, including improvements to food labelling, has been on the public agenda in Australia for some time. Recommendations supporting Traffic

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<sup>4</sup> Similar to Food Standards Australia and New Zealand's NIP calculator, a Traffic Light Calculator could be developed to help inform food producers and manufacturers about what colour traffic lights their products should display

Light Food Labelling have recently been made by the Preventive Health Taskforce (2009) and the Review of Food Labelling Law and Policy (2011).

Implementation of this approach to food labelling could be staggered in order to reduce the burden on the food industry. Over time, this labelling could also be extended to food and drinks purchased away from the supermarket, initially focusing on chain food restaurants.

#### THE NEED FOR ONGOING MONITORING AND PUBLIC EDUCATION

The extent of the change in people's use of food label information, their food choices and the composition of foods cannot be judged without regular monitoring (Blewett et al., 2011).

Existing research highlights the discrepancy between what people believe (that they understand) and their ability to actually identify the healthier choices. In order to have a clear understanding of its impact on consumer choice, and the response from the food industry, it is crucial that any change in food labelling is monitored and evaluated.

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