

Rapid review of the evidence

The need for nutrition labelling on menus



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Recommendations

Eating out is now a part of the Australian lifestyle. There is an increasing trend to eat away from home, portion sizes and energy* (kilojoule) content of meals and snacks have grown, and nutrition information is lacking at most restaurants.

In response to this, the Heart Foundation is calling for mandatory nutrition labelling on menus in cafés, quick service (fast food) restaurants and snack food outlets.

The Heart Foundation has reviewed key menu labelling studies and acknowledges the evidence is still developing. Governments should seek to 'learn by doing' to improve the nutritional knowledge and food choices for all Australians who eat out.

The Heart Foundation calls for state, territory and federal governments to:

- legislate and enforce mandatory nutrition labelling on menus and menu boards* at point-of-purchase*
- fund and run an education campaign to help Australians understand what menu labelling means and how to use it to choose healthier foods

- monitor and evaluate the menu labelling initiative to determine efficacy in Australia
- fund and/or support further research to build evidence for future action, as identified by the Heart Foundation.

Specifically, mandatory nutrition labelling on menus and menu boards should:

- apply to cafés (café/coffee chain stores, including independent stores and bakery chains), quick service restaurants (fast food chain stores and independent fast food stores) and snack food stores (snack food chain stores, ice-cream chain stores and juice bars) with 20 or more outlets and standard menu items* (see page 3)
- label energy* (kilojoule) per serve as a minimum and saturated fat and sodium/salt per serve optimally, and refer to daily intake* of kilojoules
- provide nutrition information next to the menu item, at the point-of-purchase, in a format that makes sure consumers have the best chance of seeing the information
- provide a full nutrition information panel* for all standard food items in onsite brochures or posters that consumers can easily find and read.

Governments should also support food industry to provide a greater number of menu options that contain more fibre and less energy (kilojoule), saturated and trans fats and sodium/salt. This can be achieved through food and recipe reformulation, and by using healthier ingredients and cooking methods.

*Definitions

Daily intake	Nutrition information relating to daily intake for nutrients. ¹ Reference value for energy is 8,700 kilojoules.
Energy	The foods we eat provide energy, which is measured in kilojoules or calories. 4.184 kilojoules = 4,184 joules = 1 calorie
Menu/Menu board	The list of food choices from which a consumer chooses what to order.
Nutrition information panel	Mandatory panel on all food packages containing minimum nutrition information as specified by Food Standards Australia New Zealand (FSANZ). ¹
Point-of-purchase	Place where a product is purchased, usually at the cash register.
Standard menu item	Food item that is listed on a menu or menu board for more than 90 days per calendar year. Daily specials, custom orders and menu items that appear on the menu for less than 90 days per calendar year are not standard menu items. ²

Commercial foodservice sector where nutrition labelling on menus should apply (20 or more outlets)

Category	Sub-category	Company
Cafés	Café/Coffee shop chain stores, including independent stores	Aroma Café, bb's café, Billy Baxter's, Dome Coffees, Gloria Jean's Coffees, Hudsons Coffee, Jamaica Blue, McCafé, Michel's Patisserie, Starbucks, The Coffee Club
	Bakery chain stores	Bakers Delight, Banjo's Tasmanian Bakery Café, Big Dad's Pies, Brumby's, Cookie Man, Ferguson Plarre Bakehouses, The Cheesecake Shop
Quick service (fast food) restaurants	Fast food chain stores	Ali Baba, Chicken Treat, Domino's Pizza, Eagle Boys Pizza, Hungry Jack's, KFC, McDonald's, Nando's, Noodle Box, Oporto, Pinky's Pizza, Pizza Hut, Red Rooster, Subway, Sushi World
	Small chain stores	Fasta Pasta, Hokka Hokka, La Porchetta, Taco Bill Mexican Restaurants
Snack food stores	Snack food chain stores	DCM Coffees, Donut King, Jesters Pies, Krispy Kreme, Muffin Break
	Ice-cream chain stores	Wendy's
	Juice bars	Boost Juice Bars

Source: ³



Background

In Australia in 2009, 3.7 billion meals were served by commercial foodservice outlets.^{†,3}

Of these meals, 1.6 billion were from fast food outlets, of which 60% were quick service (fast food) restaurant and snack food chain stores. This means that in 2009, 4.5 million Australians visited a fast food outlet (chain and independent store) every day.

McDonald's Australia and Yum! Restaurants Australia (KFC and Pizza Hut) represent 17% and 16% of market share respectively. Competitive Foods Australia (Hungry Jacks), Quick Service Restaurant Holdings (Red Rooster and Chicken Treat) and Domino's Pizza combined represent 9.1% of market share. The remaining 57.9% include Pizza Haven, Eagle Boys Pizza, Subway, Boost Juice Bars and other foodservice outlets.⁴

Beyond the main fast food chain stores, a number of snack food, bakery, café and juice bar chain stores sell the main share of snack foods. These snack foods include hot chips, hot dogs, frankfurts, bakery products, sandwiches, chicken burgers, chicken nuggets, fried and barbecued chicken, Asian foods, soups, salads, pizza and hamburgers.³

The demand for a range of fast foods has been largely driven by an increase in real household disposable income, age distribution of the population, competition from supermarkets and convenience stores, and growth in the variety of easy-to-prepare meals.⁴

Consumer advocacy organisations, non-government health organisations and governments are concerned with the increasing frequency with which Australians consume foods away from home, the high levels of saturated fat in many of these foods,⁵ the large portion sizes and energy (kilojoule) content.^{6,7}

In Australia, the foodservice industry has voluntarily started providing nutrition information, including daily intake percentages, to consumers via company websites and in-store pamphlets.⁸ However, evidence suggests that consumers are more likely to notice nutrition information if it is on the menu or menu board.⁹

Work to implement nutrition labelling on menus and at point-of-purchase has already begun overseas. Last year, the UK Food Standards Agency launched a voluntary trial of nutrition labelling on menus. The trial involved 18 of the largest restaurants, sandwich chain stores and workplace caterers listing energy (kilojoule) counts next to products on

shelves, on menus or at cash registers.¹⁰ In March this year, the US Government passed healthcare legislation requiring chain restaurants with 20 or more outlets to provide nutritional information to consumers at the point-of-purchase.²

In Australia and overseas, governments have chosen to focus on fast food chain stores that sell the most meals, ranging from 15 to 200 outlets. This will help their actions to have the greatest public health benefit.

At least two Australian state governments have growing interest in calling for nutrition labelling on menus in fast food chain stores.^{6,7}

Increases in obesity and related health concerns, such as cardiovascular disease, diabetes and cancer, reinforce the need for a greater number and range of healthier foods available for people who eat out. It also supports nutrition information labelling on menus to enable consumers to choose healthier foods. Lack of knowledge and understanding of the nutritional value of foods eaten away from home¹¹⁻¹⁴ may mean that Australians who eat out often do not realise or consider the impact on their overall diet and long-term health.

Including energy (kilojoules) and other nutrient values on menus may influence purchasing behaviour.¹⁵ However, measuring how effective nutrition labelling on menus is at changing consumer behaviour is complex. Clearly, the greatest identified health benefit of nutrition labelling occurs when consumers switch to lower energy (kilojoule), saturated fat and sodium/salt foods. Another important benefit is the foodservice outlet improving the nutritional profile of their foods.

Since 1989, the Heart Foundation has been committed to challenging food companies to provide healthier food choices and sign post these choices with the Heart Foundation Tick. In 2006, we launched the Tick program in the eating out sector. Foodservice outlets that meet our nutrition and quality standards and that have earned the Heart Foundation Tick must put the Tick directly adjacent to the approved meal on their menu and make full nutrition information available to consumers.

To gain maximum public health impact, a menu labelling system must be uniformly applied across foodservice outlets where people commonly eat. This is best achieved through a mandatory approach.

[†] As defined by BIS Shrapnel to include full service restaurants, hotels/motels, cafés, quick service (fast food) restaurants, snack food stores, caterers, clubs, street vendors, function centres and sporting venues.

Scope of this review

This rapid review presents recent literature on eating out and nutrition labelling on menus at fast food (quick service) and sit down restaurants.

A 2008 report by the Rudd Center for Food Policy and Obesity¹⁶ in the USA found that Americans want nutrition information on menus and that they think labelling would help them to change their buying habits and control their energy intake. However, very little is known about Australian attitudes to nutrition labelling on menus and how effective it could be as a strategy to improve food choices here.

This paper builds on the Rudd report. Specifically, it seeks to describe the evidence on:

- consumer attitudes towards nutrition labelling on menus
- consumer knowledge about the energy (kilojoules) in foods eaten out
- consumer use of nutrition labelling on menus
- evaluation of nutrition label formats
- the efficacy of additional nutrition information on menus on consumer food choices
- the efficacy of nutrition labelling on menus on sales.

We used PubMed, Medline and Google to find literature published primarily from 2007 to 2010, inclusive. Studies were limited to those published in English. This rapid review includes peer-reviewed and grey literature, such as reports, case studies, consumer testing, industry data and surveys.

Search terms used were “calorie labelling”, “calorie posting” and “menu labelling”. Additional studies were identified by checking the citations of key reviews and articles related to the topic. This led to a number of older studies (dating back to 1990) being included in this rapid review. Studies that described menu labelling in clinical and hospital settings were excluded. We sought Australian and New Zealand literature to provide transferable evidence for the Australian context, but where none was found, we accepted US, UK and other international literature.

There are very few systematic reviews or randomised controlled trials in this field of research. As a result, most of the evidence in this rapid review comes from qualitative, observational, case control and pre-test/post-test studies. These types of studies are often necessary to help us understand questions of acceptability, appropriateness and salience. As such, they are particularly useful in helping us understand the need for nutrition labelling on menus and the practicality of implementing such strategies in Australia.

While a quality appraisal framework has not been applied to the individual studies reviewed, the Heart Foundation considered the potential biases associated with qualitative, observational, case control and pre-test/post-test studies before making its recommendations.

This paper is not a systematic review, but provides information to support policy makers in their decision making. It is a basis for further evidence reviews and research.

Summary of the evidence

This review builds on the evidence from the Rudd Center report,¹⁶ which supports the need for nutrition labelling on menus.^{17–20} Foods eaten away from home have been shown to be more energy dense and of larger portion sizes than meals prepared at home.^{19,21,22} Frequency of eating outside the home is related to weight status, with frequent fast food consumption associated with weight gain over time.^{23–27}

Studies indicate that the majority of consumers considerably underestimate energy (kilojoule), total fat, saturated fat and sodium/salt content of unhealthy foods.^{11,12} This is not the case with healthy foods, for which consumers have been shown to either slightly underestimate (or even overestimate) the content of energy (kilojoules), total fat and saturated fat.¹¹

In addition, many consumers are not aware of the energy (kilojoules) they need to eat each day.^{14,28}

Nutrition information provided on posters, pamphlets or websites is not readily accessed by most consumers.²⁹ However, there appears to be some consumer support for including nutrition information on menu boards.^{14,30,31} Energy (kilojoule) information is noticed by more consumers if it is put on menu boards or closer to the point-of-purchase.³² There is also some consumer preference for macronutrients, such as fat, and fibre information to be labelled in addition to energy (kilojoule) information.³³

Measuring the impact of menu labelling is complex and the evidence shows mixed findings. Although some studies report average energy reduction of 15–250 calories when menu labelling is provided,^{32,34–38} other studies have reported no impact,³⁸ mixed findings for men and women,¹⁵ and one study found unexpected increases in the energy (kilojoule) content of meals selected by men.³⁹

The consumer benefits of menu labelling may be greatest among certain population groups, such as women and parents choosing for their children.^{15,34,37,40} More research is needed to clarify efficacy across all populations.

Furthermore, the impact of menu labelling may affect food choices later in the day. Some studies suggest that providing information about energy (kilojoule) content and the recommended daily intake of kilojoules may influence the meal choice at the time, and it may be an important factor in food choices at the next meal.^{13,30,36}

Nutrition labelling on menus may encourage the quick service (fast food) restaurant and snack food chain stores to introduce healthier foods and reformulate existing foods, as happened with the introduction of mandatory labelling on packaged foods.⁴¹ The UK experience of a kilojoule labelling scheme suggested that foodservice foods remained unchanged, but meal combinations improved.⁴² More

research is needed to measure the impact of labelling on the nutritional quality of foods.

Relatively few studies have investigated the impact of nutrition labelling on menus on sales. The studies that have been done indicate that sales either remain stable or increase slightly.^{34,43} Nutrition labelling on menus may increase food sales if consumers see more value in foods for which they have more information. Further research is needed to explore this area.

Energy (kilojoule) information is noticed by more consumers if it is put on menu boards



Studies related to nutrition labelling on menus

The energy (kilojoule) content of foods eaten out

Findings	Study type
A US study found that fast foods are more energy (kilojoule) dense than other foods in the average diet. ¹⁸	Nutrient composition analysis
In a study of 11 fast food outlets, 34% of subjects (n=7318) purchased 1,000 calories or more at lunch time. ³²	Survey

The portion size of foods eaten out

Findings	Study type
Portion sizes of meals eaten out are relatively large compared with home-prepared meals. ¹⁹	Review
Portion sizes of burgers, fries, pizza and beverages (fast food) in the USA have increased two- to five-fold in the past 50 years. ^{20,22}	Nutrient composition analysis

The relationship between portion size and energy (kilojoule) intake

Findings	Study type
Larger portion sizes have generally occurred in parallel to rising levels of weight gain in the USA. ⁴⁴	Time series analysis
In restaurant meals, the larger the portion size, the more energy (kilojoules) people were found to consume. ²¹	Observational study

The relationship between eating out and weight gain

Findings	Study type
Eating fast food is associated with weight gain. Frequent eating out, especially at fast food restaurants, is associated with excess weight gain over time. ^{23,24,27}	Longitudinal study
Frequent fast food consumption may be a marker for a generally unhealthy lifestyle. ⁴⁵	Opinion
The US CARDIA study is the first prospective study to show a causal link between frequent fast food consumption and weight gain. People who ate fast food more than twice a week gained on average 4.5 kilograms more weight over a 15-year follow up and had a 104% increase in insulin resistance than people who ate fast food less than once a week. ²⁵	Longitudinal study
A 2008 literature review examining the relationship between fast food intake and weight gain found that in cross-sectional studies, increased fast food intake was positively associated with increased energy (kilojoule) consumption in adults and children, and increased body mass index (BMI) in adults, but not in children. ²⁶ In prospective studies, there were clear associations between increased fast food consumption and increased caloric intake leading to weight gain.	Cross-sectional study

Consumer attitudes towards nutrition labelling on restaurant menus

Findings	Study type
Over 60% of consumers in US polls indicated that they would support regulation for chain restaurants to list nutrition information on their menu or menu boards. ^{46,47}	Opinion poll
Sixty-eight percent of respondents in a US survey favor the government making it mandatory for fast food restaurants to include calorie information on their menus at point-of-purchase. ⁴⁸	Survey (phone)
Sixty-three percent of respondents in a UK survey of 2,101 people wanted to know what was in their foods when they ate out. ⁹ Of these respondents, 81% preferred having information on the menu, 11% on a pamphlet and 2% on a website. Overall, 85% of respondents felt it was the responsibility of the restaurant, pub or cafeteria to help them make healthier choices.	Survey
An Australian in-store survey of 256 eligible shoppers from three different locations found that 34% of shoppers reported looking at nutrition information panels and of those, 88% reported using the information to help them make food choices in the supermarket. ⁴¹	Survey

Awareness of the energy (kilojoule) content of foods eaten out

Findings	Study type
When presented with large portions of unhealthy foods, professional nutritionists surveyed were unable to accurately estimate calorie levels. They underestimated the nutrient content by 220 to 680 calories and by 18 to 57 grams of fat. ¹¹	Survey
One third of the community and college students surveyed do not know how many calories they need to eat in a day to maintain their current weight. This indicates that reference information* needs to be provided with nutrition information. ^{14,47}	Survey
In a survey of 163 people, 90% underestimated the calorie level of unhealthy foods by an average of 642 calories. The actual calorie levels of unhealthy foods were twice as high as participants estimated. ¹² They also highly underestimated total fat, saturated fat and sodium content in the unhealthy items. Participants only slightly underestimated calories for healthy items. Total fat and saturated fat were overestimated for healthy items.	Survey
People surveyed in a US study underestimated the calories of food from restaurants marketed as having 'healthy choices', such as Subway, to a greater degree than food from restaurants not marketed as healthy, such as McDonald's. This phenomenon is called the 'halo effect'. ¹³ When people chose main courses they perceived to be healthy, they added higher calorie side dishes and beverages.	Survey
Most consumers surveyed underestimate energy (kilojoules) and fat in foods eaten out. They also tend to make greater errors when estimating energy (kilojoules) and fat in foods that are higher in calories or promoted as healthy. ^{12,13}	Survey

* Reference information lists the recommended daily caloric and nutrient intake.

Consumer use of nutrition information available on fast food menus

Findings	Study type
Many people can't easily find the nutrition information available in some restaurants. ²⁹	Observational study
Only 4% of consumers accessing fast food restaurants with calorie information in New York City reported noticing the information (excluding Subway consumers). ³²	Survey
A 2009 study in low-income communities in New York City measured pre- and post-introduction of calorie information on menus. The control city was Newark, where no calorie information was available on menus. ²⁸ The study found: <ul style="list-style-type: none"> • prior to introducing calorie information on menus in New York City and Newark, just 10 to 15% of people noticed calorie information on pamphlets, posters or wrappers • after calorie information was introduced on menus in New York City, the percentage of people noticing calorie information rose to 54% in New York City, but was only 16% in Newark • no evidence that labelling influenced total calories purchased. 	Survey
An observational study assessing the use of nutrition information in McDonald's (posters and pamphlets), Burger King (posters), Au Bon Pain (in-store computer) and Starbucks (pamphlets) stores found that only six of the stores' 4,311 customers accessed the nutrition information in these forms. ²⁹	Observational study

Effective formats for nutrition labelling

Findings	Study type
Nutrition information on restaurant menus has been shown to have stronger effects on consumer attitudes and intentions than nutrition information presented on supermarket products. ⁴⁹	Comparative study
In a controlled survey of 120 participants, participants preferred menus with more nutrition information. ³³ The participants most preferred the menu that included calorie information, macronutrients, fat and fibre, rather than just calorie information alone.	Survey
In a qualitative study, participants were shown menu boards with calorie information displayed in various ways. ³¹ The participants: <ul style="list-style-type: none"> • felt the calorie information very valuable in helping them to make a choice • preferred having healthier menu items grouped on one section of the menu board • rated positively having an icon to designate healthier menu items • who ordered á la carte preferred having the calorie information after each menu item, while participants who ordered combination meals preferred calorie information for the entire meal. 	Focus group

Effective formats for nutrition labelling *continued*

Findings	Study type
<p>A 2009 community trial examined different forms of reference information on mock menu boards. It found that:³⁰</p> <ul style="list-style-type: none"> • more than 79% of participants (n=150) indicated that they would use calorie information if provided on fast food menus • there were different preferences for reference information • almost 62% of participants indicated that they preferred “calorie needs per meal” over “calorie needs per day” reference information • participants noted that reference information helped them to make a more immediate decision about the meal they were ordering and they didn’t have to count across meals • participants who preferred the “calorie needs per day” reference information said they liked to have the wider context, and this helped them to take into account other meals they may have eaten. 	Trial
<p>In a randomised study in Connecticut,³⁶ 303 participants tested three menus: no calorie information on menu, calorie information on menu and calorie information and reference information on menu. The study found that:</p> <ul style="list-style-type: none"> • participants ordered meals with fewer calories when calorie information was provided on the menu (14% less) • participants ordering from menus with just calorie information consumed more calories after the meal, believing they had made a calorie saving • when calorie information and reference information was provided, participants ate 250 fewer calories after the study because they were able to place the meal in the context of the day’s intake. 	Randomised controlled trial
<p>A randomised study of 594 participants found that there was no significant difference in the average calories consumed when people ordered food from menus containing calorie information, calorie information and value pricing, no calorie information and value pricing (control), or no calorie information or value pricing.³⁹</p> <p>There were also no significant differences when age, race and education level were considered as confounders. However, it was found that males used calorie information to choose meals higher in calories.</p> <p>When calorie information was listed on the menu next to the item and highlighted in bright yellow, 54% of participants in the calorie information group noticed it. There was no difference in the calorie composition of meals purchased by participants who noticed calorie information compared with participants who didn’t notice it.</p>	Randomised controlled trial

Effect of nutrition labelling on menus on consumer food choices and behaviour

Findings	Study type
Studies have shown that females are more likely to use nutrition information when it is provided. ^{15,40}	Cross-sectional survey
A 2010 study indicated that 60% of Americans surveyed reported calorie information would encourage them to select a lower caloric food. ⁴⁸	Survey (phone)
In a Subway restaurant, 37% of customers who saw the calorie information said that it had an effect on their purchase. Customers who saw calorie information purchased 52 calories less than customers who did not see calorie information. ³²	Survey
A study of 594 adolescents and adults who regularly ate at fast food restaurants found that when calorie information was listed on the menu board, there was no difference in the calorie content of meals purchased by participants who noticed calorie information and participants who didn't notice it. ³⁹	Randomised controlled trial
Five out of six studies in a literature review evaluating calorie labelling in restaurants and workplace cafeterias found that calorie labelling had a beneficial effect on customer food choices. However, the magnitude of the effect was small. ³⁸	Systematic review
In a study environment, participants were presented with a standard menu item without nutrition information, the same menu item with nutrition information and a low fat menu item with nutrition information. Participants were prepared to pay more for a menu item they perceived to be healthy based on the nutrition information provided, but were not prepared to pay more if the items were perceived to be less healthy. ³³	Survey
A US survey of 241 people investigated the extent to which participants intent to purchase meals was influenced by nutrition information. The study showed that people were less likely to buy an unhealthy item (with higher levels of total fat and saturated fat) if it had higher calories than they expected. ¹²	Survey
A health impact assessment in Los Angeles County calculated that if 10% of customers at Californian large chain restaurants with 15 or more outlets ordered a reduced calorie meal in response to calorie labelling, an average of 100 calories less per meal would be consumed (95 million reduced calorie meals chosen = 9.5 billion calories saved). The assessment estimated this would avert 40.6% of the 6.75 million pound average annual weight gain in the county's population aged five years and older. ⁵⁰	Data modelling
A 2009 study of 1,156 people examined food purchases in lower-income communities in New York City (pre- and post-calorie information on menus) and Newark (calorie information not available on menus). It found no difference in calories in foods purchased after the introduction of calorie information, despite 28% of customers who saw calorie information saying it influenced their choices and 88% of those believing they purchased fewer calories. ²⁸ The strength of this study was that it examined actual food purchases in people in the 'real world'.	Survey

Effect of nutrition labelling on menus on consumer food choices and behaviour *continued*

Findings	Study type
<p>A study in Washington asked parents to choose meals for their children and themselves. It found that parents in the group where calorie information was included on the menu next to the price chose meals for their children with an average of 102 calories less than the control (no calorie information).³⁷ This was still significant when adjusted for parent gender, race, education, BMI and child's BMI z-score. There was no difference between groups in the calorie composition of the meals parents chose for themselves.</p>	Randomised controlled trial
<p>A study in Washington State examined including the calorie, fat, sodium and carbohydrate information of regular food items on menus in full service restaurants and if this would alter consumer ordering patterns.³⁵ It looked at pre- and post-nutrition labelling of entrees, and assessed whether or not customers noticed the nutrition information and used it when choosing their meals.</p> <p>The study found that entrees purchased post-labelling contained 15 fewer calories, 1.5 grams less fat and 45 milligrams less sodium. There was no change in carbohydrate content. Twenty percent of customers said they chose an entree lower in calories and 16% said they chose one lower in fat. Seventy-one percent of customers noticed the nutrition information, but only 33% of these customers used it to change their behaviour.</p>	Survey and sales analysis
<p>A recent paper examined actual purchases rather than intention to buy. Researchers examined every transaction at Starbucks stores from January 2008 to February 2009. Calorie information was introduced in New York City in April 2008.³⁴</p> <p>The researchers compared the data from the New York Starbucks with stores in Boston and Philadelphia, where there was no calorie information. They found that calorie information influenced consumer behaviour, with average calories per transaction decreasing by nearly 6%. Those calorie reductions persisted for the entire period of collection. Interestingly, only a quarter of those transactions were due to switching to a lower calorie item, while three quarters were due to customers purchasing fewer items per transaction.</p> <p>The research also found that calorie information disproportionately affected consumers who purchased higher calorie foods. These customers reduced their calories per transaction by 26%, much higher than the 6% average. There was no change for beverage purchases.</p>	Sales analysis
<p>Individual Starbucks cardholders who regularly purchased from stores inside and outside of New York City showed that they continued to reduce their calories per food transaction, even when purchasing outside of New York City at stores where there was no calorie information.³⁴</p>	Sales analysis

Effect of nutrition labelling on fast food menus

Findings	Study type
While it is difficult to determine if menu labelling has affected the foods available from fast food stores in the USA, the Rudd Report mentions that the requirement for food packages to label trans fat has led to significant reformulation in the US packaged food market. ¹⁶	Opinion
A recent evaluation of a calorie information labelling scheme in the UK found that calorie information did not result in foodservice outlets changing the nutritional quality of their foods. However, they were more likely to put together more calorie-favourable meal combinations (e.g. removing coleslaw as a side dish in a meal combination) when calorie information was higher than expected. ⁴²	Survey

Effect of nutrition labelling on menus on sales

Findings	Study type
<p>A 1990 study put 'low fat and cholesterol' claims next to entrees on menu boards close to the register in four family-style restaurants and provided tip sheets on how to identify and cook healthier foods.⁴³ It found:</p> <ul style="list-style-type: none">• there were increases in sales of those items in two out of the four restaurants• more females than males saw the menu labels, understood them, took a tip sheet and followed the recommendations from it.	Survey and sales analysis
<p>The only study to examine actual sales data examined every transaction at Starbucks stores from January 2008 to February 2009 (calorie information was introduced in New York City in April 2008).³⁴ It compared the data from the New York Starbucks with stores in Boston and Philadelphia, where there was no calorie information.</p> <p>The study found that there was no effect on sales revenue at Starbucks stores that had calorie information. In fact, where stores were located close to their competitor, Dunkin Donuts, the sales at Starbucks increased by 3%. This may indicate that customers saw value in the information and were likely to purchase at Starbucks over a competitor because of it. However, the lack of change in sales may be explained by the fact that beverages are Starbucks core business and beverage purchases did not change in response to calorie information availability. Food purchases, not core business, did decrease per transaction in stores where calorie information was available.</p>	Sales analysis

Evidence gaps and limitations

The majority of research in this field is from studies conducted in North America. Therefore, drawing conclusions and generalising to other countries about the impact of nutrition labelling on menus is difficult.

In addition, it is complex to evaluate and analyse consumer behaviour change as a result of nutrition labelling on menus.

Of the studies reported, many have research design limitations, such as lack of randomised control and social desirability bias. Other studies have been limited in their ability to attribute their findings to nutrition labelling because there were multiple concurrent efforts promoting healthy eating during the study period.

Future research

The Heart Foundation recommends further research in the following areas.

- **Trials of nutrition labelling on menus in Australia.**

This will help to:

- determine the most clear and easy-to-interpret format for nutrition labels on menus
- quantify the effectiveness of the strategy on consumer food choices when eating out, including in full service restaurant settings where there is a wider choice of foods available
- measure the effect of repeated exposure to nutrition labelling on menus (with and without supportive nutrition education and price incentives)
- track purchase behaviour pre- and post-nutrition

labelling of standard foods and measure changes via sales data

- measure the effectiveness of nutrition labelling information, with and without references to daily kilojoule intake, across various populations, including teenagers, women, men and older people
 - measure the impact of providing information about energy (kilojoule) content and daily kilojoule intake on consumers' subsequent meal choices.
- **Exploration and development of evidence-based consumer messages.** These messages could be used in an education campaign to help consumers understand energy (kilojoules) and how to use energy (kilojoule) values labelled on menus to choose healthier foods.

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The information contained in this rapid review is current as of September 2010.