Healthy eating or chips with everything?

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Introduction
Since the 1970s consumers have been bombarded with messages extolling the virtues of a healthy diet and lifestyle. These communications have initially come from the government but increasingly they have come from manufacturers and retailers. By the year 2010 the Government aims to reduce the death rate from heart disease, strokes and related illness in the under-65s by a third and reduce the death rate from cancer by a fifth in the same age group (The Department of Health, 1998). Moving into the new millennium it is necessary to ask whether people understand what constitutes a healthy and nutritious diet and whether they have changed their food consumption habits accordingly.

What is healthy eating?
The lack of a healthy diet is the main cause of many of the diseases afflicting western society such as coronary heart disease, cerebrovascular disease and various types of cancer (Wheelock, 1992; WHO, 1990). The aim of eating healthily is to maintain physical health and prolong life through preventing the development of diseases which are caused by a dietary component or a combination of dietary components. An excessive amount of saturated fat in the diet has been found to cause coronary heart disease and cerebrovascular disease (WHO, 1990) which may be prevented by a diet rich in polyunsaturated fatty acids (Burr et al., 1989). The relationship between dietary components and cancer is less well established but some epidemiologists estimate that 30-40 percent of cancers in men and up to 60 percent of cancers in women are due to diet (Doll et al., 1981). Healthy eating, in particular increasing the amount of polyunsaturated fatty acids in the diet, can be used to alleviate the symptoms of rheumatoid arthritis, psoriasis and ulcerative colitis and other diseases (Bittiner et al., 1988; Lancet, 1988; Lorenz et al., 1989).

Various scientific bodies have taken into consideration the evidence relating the contribution of diet to the development of different diseases and have produced a number of guidelines for eating healthily (NACNE, 1983; COMA, 1984, 1994; WHO, 1990). These bodies have agreed on the...
recommendations for a number of dietary components:
- Fat intake should be reduced, particularly saturated fatty acids. The intake of polyunsaturated fatty acids should be increased.
- Fibre intake should be increased.
- Sugar intake should be increased no further.
- Salt intake should be reduced.

Despite the dissemination of this dietary advice, a healthy diet is not always easily attainable. There are a wide variety of influences affecting whether people will eat a healthy diet. These include social factors, income, age, religious beliefs, culture, environmental and ethical concerns. All of these interact to determine whether a person will choose a healthy and nutritious diet.

Are healthy eating messages believed?

The increase in demand for health foods has been fuelled by the Government and the media. A considerable proportion of people (58 percent) know what they should and should not do to keep healthy and approximately a third try to keep up to date with the latest advice and are keen to try new products. However, despite the abundance of information available on healthy eating, 42 per cent do not know what they should do to keep healthy, 17 per cent are confused by the information, 15 per cent have a cavalier attitude to their health and a number of people are sceptical and/or simply fed up with being told what to eat (Mintel, 1997).

The public do not trust the food messages they receive from manufacturers preferring to believe that doctors, scientists and experts are more reliable with government ministers being the least reliable. Consumer groups were considered to give the most reliable information on healthy eating and food safety (Marketing, 1996). Furthermore, a recent survey for the British Heart Foundation revealed that many shoppers are confused by the nutritional labels on foods. It argued that the information provided is basically useless to shoppers as they tend not to have any idea of how these data relate to what they should be consuming. The report showed that consumers were twice as likely to respond to the promotional claims for health-giving properties on the front of the packs than the more scientific data on the back and that in 30 per cent of cases shoppers selected the least healthy product when provided with a choice (The Guardian, 1997). It has been argued that there is a “profusion and confusion” of information and that experts are “always changing their minds”. Consumers become fed up with these conflicting messages and as it is impossible to follow all the advice they tend to ignore it instead (The Guardian, 1995).

The state of the nation’s diet

One of the main problems to be faced when investigating healthy eating markets is the difficulty in collecting data. A healthy diet, and therefore healthy eating, consists of an appropriate combination of a range of foods and is not dependent upon the consumption of specific health foods. There is a certain amount of confusion about what is a “health food” and what is a “healthy food” (Darrall, 1992). Mintel (1998) has defined health foods as products traditionally sold in health food stores. This definition includes natural foods, vegetarian foods and others such as spices, herbs, seasonings. “Healthy food” is used to refer to healthy versions of ordinary foodstuffs.

The increasing awareness of the importance of healthy eating is reflected in the sales of health food products which have risen steadily between 1992 and 1997, with sales figures estimated as reaching £1.25 billion in 1998. Health food store sales were expected to reach £328 million in 1998, an increase of 12 per cent since 1992. However, in real terms sales have been declining, due mainly to the increasing competition from multiple retail outlets and chemists who have moved into the health food sector. In terms of consumer expenditure sales have increased by 15.6 per cent between 1992 and 1998 (see Table I (Mintel, 1998)).

It is difficult to quantify the adoption of a healthy diet by the nation as this is dependent upon the consumption of an appropriate, but not prescribed, combination of food items, in line with the healthy eating guidelines mentioned earlier. It is generally acknowledged that the amount of red meat and butter consumed has decreased whereas the amount of poultry, vegetable oils and low fat spreads,
skimmed milk and semi-skimmed milk has increased (MAFF, 1990, 1991, 1998; Keynote, 1998). Table II shows some of the changes in consumption of key food groups that have taken place over the last 20 years. These figures show a fall in the consumption of white bread while the amount eaten of brown bread, arguably the healthier option, has risen by 82 per cent. There has been an increase of 44 per cent in the consumption of fruit but the comparative figure for vegetables shows a slight fall except for frozen chips and potato products which exhibit a massive rise of 488 per cent over the last 20 years, reflecting the consumer’s fondness for chips and convenience foods. These changes have occurred slowly and the present-day British diet still needs to undergo further change. The amount of fat, particularly saturated fatty acids, protein, sugar and salt in the diet still need to be reduced and amounts of carbohydrates and starch increased. The amounts of polyunsaturated fatty acids and fibre were generally found to meet with the recommended guidelines (MAFF, 1990, 1991, 1998; Salmon, 1991).

Despite the fact that the figures show an increase in demand for some health foods and food products with healthy properties, recent reports indicate that many people are still eating an unhealthy diet. In 1996 a report by the British Heart Foundation says 84 per cent men and 71 per cent of women agree they do not eat healthily but that they do not want to change their diet (The Daily Telegraph, 1996b). Alternative research indicates that consumers think they have made the necessary changes to their diet when in reality they have not; in particular young consumers perceive the health risks to be a long way off and are therefore not motivated to change their consumption patterns (The Daily Telegraph, 1996a). We think we have moved away from a poor diet but have in fact increased consumption of fast foods, crisps, cakes and frozen meals at a faster rate than our

Table I Health foods: consumer expenditure trends by category at current prices 1991-1998 (£m)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Natural foods</td>
<td>179</td>
<td>185</td>
<td>192</td>
<td>199</td>
<td>205</td>
<td>215</td>
<td>220</td>
<td>+22.9</td>
</tr>
<tr>
<td>Vegetarian foods</td>
<td>234</td>
<td>270</td>
<td>309</td>
<td>345</td>
<td>373</td>
<td>414</td>
<td>455</td>
<td>+94.4</td>
</tr>
<tr>
<td>Others</td>
<td>665</td>
<td>649</td>
<td>631</td>
<td>622</td>
<td>596</td>
<td>582</td>
<td>571</td>
<td>−14.1</td>
</tr>
<tr>
<td>Total</td>
<td>1,078</td>
<td>1,104</td>
<td>1,132</td>
<td>1,166</td>
<td>1,174</td>
<td>1,211</td>
<td>1,246</td>
<td>+15.6</td>
</tr>
</tbody>
</table>

Source: Mintel (1998)

Table II The consumption of various food categories from 1975-1997 (grams per week per person for all categories except milk which is millilitres per person per week)

<table>
<thead>
<tr>
<th>Food category</th>
<th>1975</th>
<th>1985</th>
<th>1995</th>
<th>1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat and meat products</td>
<td>1,047</td>
<td>1,042</td>
<td>945</td>
<td>940</td>
</tr>
<tr>
<td>Poultry</td>
<td>162</td>
<td>186</td>
<td>215</td>
<td>221</td>
</tr>
<tr>
<td>Sugar and preserves</td>
<td>388</td>
<td>291</td>
<td>177</td>
<td>169</td>
</tr>
<tr>
<td>Vegetables</td>
<td>2,161</td>
<td>2,407</td>
<td>2,081</td>
<td>2,061</td>
</tr>
<tr>
<td>Chips (exc. frozen chips)</td>
<td>31</td>
<td>18</td>
<td>30</td>
<td>−</td>
</tr>
<tr>
<td>Frozen chips and other frozen potato products</td>
<td>18</td>
<td>63</td>
<td>99</td>
<td>106</td>
</tr>
<tr>
<td>Fruit</td>
<td>495</td>
<td>524</td>
<td>672</td>
<td>712</td>
</tr>
<tr>
<td>Cereals (inc. bread)</td>
<td>1,620</td>
<td>1,526</td>
<td>1,444</td>
<td>1,518</td>
</tr>
<tr>
<td>White bread</td>
<td>784</td>
<td>549</td>
<td>443</td>
<td>431</td>
</tr>
<tr>
<td>Wholemeal and brown bread</td>
<td>94</td>
<td>208</td>
<td>173</td>
<td>171</td>
</tr>
<tr>
<td>Butter</td>
<td>160</td>
<td>80</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td>Margarine</td>
<td>73</td>
<td>106</td>
<td>41</td>
<td>26</td>
</tr>
<tr>
<td>Low/reduced fat spreads</td>
<td>–</td>
<td>–</td>
<td>72</td>
<td>77</td>
</tr>
<tr>
<td>Other fats and oils</td>
<td>9</td>
<td>0.56</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Liquid whole milk</td>
<td>–</td>
<td>1,844</td>
<td>778</td>
<td>684</td>
</tr>
<tr>
<td>Low fat milk</td>
<td>–</td>
<td>244</td>
<td>1,103</td>
<td>1,136</td>
</tr>
</tbody>
</table>

increased consumption of fruit and vegetables (*The Times*, 1996). The proportion of the population who may be defined as obese is on the increase, despite Government targets to reduce obesity levels, with 16 per cent of women and 13 per cent of men, in this category (Mintel, 1997).

One of the factors limiting the sale and consumption of healthy foods is their frequent incompatibility with the convenience characteristics required by today’s consumer and their higher costs (Gofton and Ness, 1991; Mintel, 1998). Research by Newcastle University showed that foods’ ability to “keep well” and to be “quick to prepare” were more important to consumers than “health” characteristics. However, several convenience food producers, including McCain, one of the UK’s major oven chip manufacturers, have chosen to promote the health benefits of their products. Recently McCain’s marketing manager stated, “We want to educate and surprise consumers on the true facts and health benefits of oven chips”, adding that consumers should be able to eat their product “without feeling guilty” (*The Grocer*, 1998).

### The research on healthy eating

Research was carried out to investigate the nation’s current degree of interest in healthy eating and to find out whether people are taking note of the contemporary Government and scientific guidelines or whether they are uninterested. The demographic characteristics of people who are interested in healthy eating were examined to find out whether there are any sections of society particularly involved in the area. Information was also sought on which sections of society are ignoring or rejecting the healthy eating message and which therefore need to be specifically targeted. People are bombarded with healthy eating messages from a variety of sources both official and unofficial and it is important to assess whether they understand the information.

The research involved two methodologies – an interview-administered survey and group discussions. In order to obtain a quantitative measure of the respondents’ involvement in healthy eating the survey contained Zaichkowsky’s Personal Interest Inventory. Involvement was defined by Zaichkowsky as the “person’s perceived relevance of the object based on inherent needs, values and interests”. The measure consists of ten pairs of semantic differentials – e.g. important to me/unimportant to me – which are rated on a seven-point scale (Zaichkowsky, 1985, 1987). The demographics of the respondents were also recorded. A total of 311 people representative of the UK in terms of age, socio-economic class, employment status and region completed the survey. Eight group discussions were carried out each containing eight respondents. These respondents were also representative of the UK in terms of their age, socio-economic class and region. The group discussions investigated how important healthy eating was to the participants and whether it was of interest to them. Their knowledge and understanding of various guidelines, specifically sugar, salt, fat, fruit and vegetables and alcohol intakes were also examined.

### The research results

For the measure of involvement in healthy eating the theoretical scores range from ten through to 70 and the theoretical mean is 40. The sample’s mean score for involvement in healthy eating was 50.3 (s.d. 12.9, \( n = 310 \)). The minimum score was ten and the maximum score was 70. The influence of a number of demographic variables on involvement in healthy eating scores was investigated in order to determine whether they could be used to predict who would be a healthy eater.

It can be observed from Figure 1 that most of the sample perceive themselves to be moderately or highly involved in healthy eating.
eating, i.e. they scored 40 or above. There are relatively few people who regard themselves as uninterested in healthy eating, i.e. scoring less than 40. The majority of respondents in the group discussions stated that they were moderately interested in healthy eating, reinforcing the findings from the survey. People who were uninterested in healthy eating may find it difficult to motivate themselves when there is a lack of tangible benefits or they may be cynical about the results of healthy eating and a nutritious diet, using statements such as “My grandad had a fry-up every morning and lived to be 86”.

It was expected that women would be more involved in healthy eating than men as women are perceived as the gatekeepers of the family’s health. They are generally responsible for the planning, purchase and preparation of meals and will want to maintain their family’s physical wellbeing, gathering information to help provide a healthy and nutritious diet. It can be observed from Figure 2 that women are more involved in healthy eating than men; however, this result was not statistically significant (see Table II). Responses from the group discussions suggested women were more involved with and informed about healthy eating than men but that some of the male participants, particularly those involved in sports, took care to eat healthily.

It was also expected that people in higher socio-economic classes would be more involved in healthy eating as they are likely to have a greater degree of education to enable them to understand health reports and to implement their advice. They will also have the disposable income to be able to buy the foods that make up a healthy diet. It can be observed from Figure 3 that classes A and B had the greatest interest in healthy eating but this interest did not decrease with decreasing class. Involvement in healthy eating increased from C1 to D and E, as socio-economic class decreased. It is possible that this is linked to levels of disposable income and time available for food preparation with C1’s favouring less healthy convenience foods.

Age and employment status were not expected to influence involvement in healthy eating. It was anticipated that there would be a range of interest in healthy eating within each age group and employment category. Involvement in healthy eating actually increased from the 16-24 age group to the 55-64 age group before decreasing slightly for the 65 plus age group (see Figure 4). It is possible that as people get older and more susceptible to various diseases they take a greater interest in health issues and healthy eating. The decrease in involvement in healthy eating of the 65s and over may be linked to lower income levels, or a greater resistance to changing consumption behaviour. It is also possible that this group has been more exposed to conflicting healthy

![Figure 2](image1.png) The effect of gender on involvement in healthy eating

![Figure 3](image2.png) The influence of socio-economic class on involvement in healthy eating scores

![Figure 4](image3.png) The influence of age on involvement in healthy eating
eating messages over a period of time and have therefore lost interest in the subject.

Figure 5 shows the influence of employment status on involvement in healthy eating. Although the analysis was not statistically significant the results indicate that when people have time as well as income they are more likely to be involved in healthy eating.

One-way analyses of variance were performed to find out whether involvement in healthy eating was influenced by any of the demographic variables and whether healthy eaters had a specific demographic profile (see Table III). The data reveal that healthy eaters do not have a specific demographic profile but confirm that the healthy eating messages have permeated through all layers of society, in particular females, socio-economic classes A and B, people aged 45-64 and those working part-time. It could also be stated that there are people from all layers of society who still need to be made aware that healthy eating is relevant to them.

Although the data above have revealed that the majority of people are interested in healthy eating, it is important to know whether they understand the information they receive and are able to use it to modify their diet. It is also an indication of how successful the Government and scientific bodies have been in conveying their healthy eating messages. During the group discussions the respondents were asked about the sugar, salt, fat, fruit and vegetable and alcohol guidelines.

Current thinking suggests a reduction in the amount of sugar in the diet. All of the participants were aware of this and had taken steps to reduce their intake. Methods of reducing their intake included obvious strategies such as taking less or none in drinks or on cereals. None of the respondents stated they used sugar substitutes. Many people were aware of “hidden” sugar in products such as tomato ketchup but no one mentioned buying reduced sugar versions of products.

The current guidelines recommend reducing the amount of salt in the diet. All of the participants were aware of this recommendation. Various strategies were employed to reduce salt intake such as not using it during cooking and not having it on the table. A few people used a low sodium alternative. Once again people were aware of “hidden” salt but nobody mentioned purchasing reduced salt alternatives of ordinary products.

In the past a general reduction in the overall amount of fat in the diet was recommended, but, more recently, various types of fat have emerged each with differing guidelines. All of the participants were aware of the need to reduce the amount of fat in their diet. Most people knew saturated fats have an adverse effect on health and a few people knew polyunsaturated fats have a beneficial effect on health. However, there was confusion about which fats had which properties leading some people to believe saturated fats were beneficial to health and polyunsaturated fats have an adverse effect on health. There were a few people who perceived all fats to have an adverse effect on health. Many people had made an effort to reduce the amount of fat and change the type of fat in their diet. They would grill food, use skimmed or semi-skimmed milk, low fat spread, olive oil, eat less red meat etc.

The Government and scientists have recommended an intake of five portions of fruit and vegetables per day. Very few people knew the correct answer. The majority of people tended to underestimate the amount required and generally believed it to be two or three portions. People know fruit and vegetables are an important part of a healthy and nutritious diet and this result may be due to the fact that this is a relatively new guideline which has not had high profile coverage.

![Figure 5 The influence of employment status on involvement in healthy eating](image-url)

**Table III** One-way analyses of variance for involvement in healthy eating and various demographics

<table>
<thead>
<tr>
<th></th>
<th>F-ratio</th>
<th>F prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>2.1995</td>
<td>0.1391</td>
</tr>
<tr>
<td>Age</td>
<td>1.0265</td>
<td>0.4020</td>
</tr>
<tr>
<td>Socio-economic class</td>
<td>1.4960</td>
<td>0.2157</td>
</tr>
<tr>
<td>Employment status</td>
<td>0.8218</td>
<td>0.5349</td>
</tr>
<tr>
<td>Region</td>
<td>1.6944</td>
<td>0.1854</td>
</tr>
</tbody>
</table>
The current thinking on acceptable alcohol consumption has recently changed from 21 units for a man and 14 units for a woman per week to 28 units for a man and 21 units for a woman per week. Participants were generally familiar with the old figures and quoted them. A number of people were aware that the guidelines had changed but only a few actually knew the new figures.

In addition to the responses on specific food groups reported above it was clear that several individuals supported the view that “it’s not just healthy eating but a healthier lifestyle that is important”. The respondents in the discussion groups were aware that there is a lot more information on healthy eating than 15 years ago. Many believed they have a healthier diet than they used to but feel they can’t worry about everything. Within the groups there were often very conflicting views, with some individuals being very involved with healthy eating and others who “have just given up”. In particular respondents indicated that excessive information on healthy eating can have the opposite effect to the one intended as “a puritanical message gets boring”.

It would appear that established guidelines such as reducing the amount of sugar and salt in the diet are understood by the majority of people, leading them to make a few minor changes in their diets; i.e. the Government has been partially successful in conveying its healthy eating messages. Problems arise when the guidelines have been subdivided (e.g. fat), altered (e.g. alcohol) or are new (e.g. fruit and vegetables). These guidelines need to be publicised in a clear, comprehensible manner in order to be received and utilised by the general public.

Conclusions and implications

While it is evident that British consumers would like to believe that they have a healthy diet the research has shown that for many people this is not the case. Although most respondents to the survey and participants in the group discussions indicated that they were very interested in healthy eating issues this does not appear to have been reflected in the nation’s purchase of foods with healthy properties. The consumption of junk foods, and fast or convenient foods, is rising as fast as, if not faster than, the consumption of healthier food items. The research has indicated that basic demographic characteristics have some value in predicting which consumers are most likely to be interested in healthy eating. Measures of involvement in healthy eating issues provide some further insights but it is clear that additional variables need to be investigated to identify better predictors of behaviour.

The high level of awareness of the need for a nutritious diet and healthy eating habits indicates that the Government and scientific bodies have had some success in conveying their healthy eating messages which have permeated through all layers of society. However, high levels of distrust, confusion or simply boredom with the messages are limiting people’s response. The Government, when altering guidelines or introducing guidelines, needs to devise messages which are clear, simple and which are not likely to be subject to frequent amendments and therefore distrust. Campaigns on healthy eating need to be promoted through a wide variety of media such as television and radio programmes, newspapers, general and specialist magazine articles and advertisements, to ensure the breadth of coverage is maintained. It would appear that most people are familiar with the basic methods of how to implement changes in their diet, for example, reducing the amount of sugar in drinks, grilling food instead of frying, etc. However, further information showing how healthy eating can also be convenient and enjoyable are needed; otherwise, although the healthy eating message is widely heard and understood, a large portion of the British population will continue to ask for chips with everything!

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