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Webster, Jacqueline, Li, Nicole, Dunford, Elizabeth K., Nowson, Caryl A. and Neal, Bruce 2010, Consumer awareness and self-reported behaviours related to salt consumption in Australia, *Asia Pacific journal of clinical nutrition*, vol. 19, no. 4, pp. 550-554.

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Short Communication

Consumer awareness and self-reported behaviours related to salt consumption in Australia

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Australians are eating far more salt than is good for health. In May 2007, the Australian Division of World Action on Salt and Health (AWASH) launched a campaign to reduce population salt intake. A consumer survey was commissioned to quantify baseline aspects of awareness and behaviour related to salt and health amongst Australians. A total of 1084 individuals aged 14 years or over were surveyed by ACA Research using an established consumer panel. Participants were selected to include people of each sex, within different age bands, from major metropolitan and other areas of all Australian states and territories. Participants were invited via email to complete a brief questionnaire online. Two-thirds knew that salt was bad for health but only 14% knew the recommended maximum daily intake. Seventy percent correctly identified that most dietary salt comes from processed foods but only a quarter regularly checked food labels for salt content. Even fewer reported their food purchases were influenced by the salt level indicated (21%). The survey showed a moderate understanding of how salt effects health but there was little evidence of action to reduce salt intake. Consumer education will be one part of the effort necessary to reduce salt intake in Australia and will require government investment in a targeted campaign to achieve improvements in knowledge and behaviours.

Key Words: salt, sodium, consumer, behaviour, public health

INTRODUCTION

The fact that diets high in salt lead to high blood pressure,¹,⁴ and that elevated blood pressure levels are an important determinant of cardiovascular disease, is well documented.⁵ There is also very clear evidence that salt reduction lowers blood pressure. Strategies to reduce population salt intake are multi-faceted and in every case include consumer education.⁶

Whilst it is generally believed that Australian consumers understand that too much salt is bad for their health, national data about awareness and behaviours related to salt are largely absent or else restricted to selected populations.⁷ Australian surveys examining the use of food labels have shown that salt falls low on the list of health priorities and is further confused by the use of sodium instead of salt.⁷⁻⁹

The Australian Division of World Action on Salt and Health (AWASH) was established in December 2005. In May 2007, it launched its strategy to reduce population salt intakes to 6 grams a day over five years. The main components of the AWASH campaign are 1) to reduce the salt content of processed and catered foods; 2) to increase consumer awareness and influence behaviour in relation to salt; and 3) to support clear labelling of foods that makes the salt content immediately apparent. Each of these has been an element of the national salt reduction strategies that have demonstrated a population-wide impact on salt intake. Encouraging consumers to choose lower salt products has a direct impact on an individual’s salt intake but also creates an incentive for the food industry to manufacture foods with a lower salt content.¹⁰

To inform the development of the AWASH strategy, a consumer survey was commissioned to quantify awareness and reported behaviours related to salt and health amongst Australian consumers.

MATERIALS AND METHODS

A survey was done under contract in March of 2007 by a commercial survey organisation, ‘ACA Research’, using an established consumer panel held by Pureprofile.

Participants and recruitment

Individuals aged 14 years or over were identified by ACA Research from the Pureprofile consumer panel. Participants were sought from all states and territories of Australia with the aim of recruiting a similar number of respondents of each sex in four age bands (14-20, 21-40, 41-60, and >60 years).

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Manuscript received 10 March 2010. Initial review completed 9 September 2010. Revision accepted 22 October 2010.
Data collection
The questionnaire contained 23 questions covering socio-demographic characteristics, knowledge about salt, behaviours relating to salt and use of food labels with regard to making food choices. Information that could identify participants in the survey was not collected and ACA Research provided final data with no personal identifiers.

Statistical analyses
Proportions of respondents reporting each characteristic were calculated for each year by age and sex strata, and weighted to the Australian population in 2006 as reported by the Australian Bureau of Statistics. Logistic regression models were used to explore associations between responses and age, sex, level of education and income. The analyses were done using the SAS System for Windows, Version 9.1 and p-values below 0.05 were considered unlikely to have arisen by chance.

RESULTS
There were 1084 individuals aged 14 - 85 years that completed the survey. The survey sample in was highly comparable to the overall Australian population in terms of age, sex, educational attainment and income (Table 1).

Two thirds of survey participants were aware of the adverse effects of salt on health. Salt was the third leading dietary concern after saturated fat and sugars and ahead of artificial flavours, artificial colours and energy content (Table 2). The adverse effects of salt on blood pressure were understood by most and three quarters were aware of the adverse effects of salt on heart attack and stroke. However, less than half knew that excess salt consumption caused kidney disease.

More than half thought that they were probably eating too much salt (p<0.0001), had better knowledge of the harmful effect of salt on health (p<0.001) and were more likely to check food labels (p<0.0001). Finally, higher levels of education were associated with a better knowledge of the relationship between salt and sodium (p<0.0001) but had no clear effect on the likelihood of using food labels to try and select healthier foods or to take any actions to reduce salt intake. There was no clear effect of level of household income on the main findings in regard to knowledge and behaviours related to salt and health.

DISCUSSION
Our results suggest that consumer awareness about salt in Australia is rather low and show that while there is reasonable knowledge of the adverse effects of salt on health, only a small number of consumers regularly take action to reduce their salt intake. These findings are in line with other Australian research that showed half of all consum-
ers have trouble identifying low salt options and were unable to accurately use labelled sodium information. It is unlikely that there will have been substantive changes in consumer behaviour and awareness related to salt since the conduct of this survey because there has been no social marketing campaign designed to achieve such change.

The inadequacy of current food labelling schemes in Australia is highlighted by the observation that only a quarter of respondents checked the label for sodium content and less than a half understood the relationship between salt and sodium (the way salt content is reported on food labels in Australia). There is a clear need for a national marketing campaign designed to achieve such change.

Furthermore, the results are broadly comparable to those obtained in a recent survey done in the United Kingdom and this again provides reassurance that the main findings are unlikely to be seriously biased.

**Conclusions and implications**

This research has identified some important gaps in knowledge about the adverse effects that salt has on health amongst Australians, yet also provides significant hope for the future with salt identified as an important health issue by many. Consumers are increasingly interested in the health aspects of their diets and need to be provided with an environment that is supportive of their dietary goals. This survey will be repeated in subsequent years but it is unlikely that a significant change in consumer awareness and behaviour will be achieved without government action in the interim. Salt reduction should be a health priority for Australia as it is one of the few interventions that is both plausible and has the potential to avert a large disease burden at low cost.

**AUTHOR DISCLOSURES**

None declared.

**REFERENCES**


### Table 2. Knowledge and behaviours related to salt amongst Australians aged 14 – 85 years†

<table>
<thead>
<tr>
<th>Knowledge about effects of salt on health</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improves health</td>
<td>8</td>
</tr>
<tr>
<td>No effect on health</td>
<td>13</td>
</tr>
<tr>
<td>Worsens health</td>
<td>67</td>
</tr>
<tr>
<td>No idea about health effects</td>
<td>12</td>
</tr>
<tr>
<td>Believe that salt may adversely affect</td>
<td></td>
</tr>
<tr>
<td>High blood pressure</td>
<td>87</td>
</tr>
<tr>
<td>Stroke</td>
<td>77</td>
</tr>
<tr>
<td>Heart attacks</td>
<td>75</td>
</tr>
<tr>
<td>Kidney disease</td>
<td>44</td>
</tr>
<tr>
<td>Knowledge of recommended maximum daily intake of salt (6g)</td>
<td></td>
</tr>
<tr>
<td>Knew 6 grams</td>
<td>14</td>
</tr>
<tr>
<td>Believed recommended maximum lower</td>
<td>28</td>
</tr>
<tr>
<td>Believed recommended maximum higher</td>
<td>6</td>
</tr>
<tr>
<td>No idea of recommended maximum</td>
<td>52</td>
</tr>
<tr>
<td>Belief about personal salt consumption</td>
<td></td>
</tr>
<tr>
<td>More than the maximum recommended</td>
<td>23</td>
</tr>
<tr>
<td>About the maximum recommended</td>
<td>31</td>
</tr>
<tr>
<td>Less than the maximum recommended</td>
<td>25</td>
</tr>
<tr>
<td>Don’t know</td>
<td>22</td>
</tr>
<tr>
<td>Food content labels</td>
<td></td>
</tr>
<tr>
<td>Often check labels</td>
<td>51</td>
</tr>
<tr>
<td>Often check labels specifically for salt content</td>
<td>26</td>
</tr>
<tr>
<td>Information on food labels often affects purchasing decisions</td>
<td>39</td>
</tr>
<tr>
<td>Salt content indicated on label often affects purchasing decisions</td>
<td>21</td>
</tr>
<tr>
<td>Often try to buy ‘low salt’ foods</td>
<td>33</td>
</tr>
<tr>
<td>Often try to buy ‘no added salt’ foods</td>
<td>30</td>
</tr>
<tr>
<td>Often add salt during cooking</td>
<td>21</td>
</tr>
<tr>
<td>Often add salt at the table</td>
<td>21</td>
</tr>
</tbody>
</table>

† Proportions estimated by weighting age specific estimates from survey to Australian population in 2006.


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澳洲消費者對食塩攝取的認知及消費行為

澳洲消費者的食塩攝取已趨對健康有危害的高量。2007年5月，食塩與健康的世界行動澳洲分會(AWASH)發起降低食塩攝取量的活動。先執行始點的消費者調查，以評量澳洲人對食塩和健康的認知與行為。從已建立好的消費者固定樣本抽出14歲或以上的1084位民眾，由ACA Research進行調查。受試者從澳大利亞各州及領地的主要城市及其他地區的各年齡層的男女性中分別選出。以電子郵件邀請受試者填寫簡要的網路問卷。有三分之二受試者知道食塩對健康有害，但只有14%的人確知建議的每日最高攝取量。有70%受試者確信飲食中的塩主要來自加工食品，但只有四分之一的人經常查看食品標示的塩含量。只有21%的受試者在購買食物時，會受到塩含量標示的影響。這份調查顯示澳洲人對食塩和健康關係的認知為中等程度，但有助降低食塩攝取量的行動跡象很少。為了降低澳洲人食塩攝取量，消費者教育將是一個必要的努力，並且需要政府投資目標性活動，以改進相關的知識和行為。

關鍵字：食塩、鈉、消費者、行為、公共衛生