

# Mercury in fish: using targeted consumer advice as a key risk management tool

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## ABSTRACT

This paper examines a public education campaign to inform pregnant women, those planning pregnancy, and breastfeeding women how to maximise the health benefits of fish while reducing mercury risks. It outlines an innovative three-prong approach used by the New South Wales (NSW) Food Authority to reach the 85 000 women who give birth in NSW each year. Early indications suggest that the campaign, launched in May 2005, has successfully deflected previous negative media about the risks associated with fish consumption, and has provided the target group with accurate dietary information. This in turn has enabled those women to make healthy and informed dietary choices, to maximize the benefits of fish while reducing the potential risks from mercury.

## INTRODUCTION

Some species of fish (for example, shark, swordfish, marlin) have elevated mercury levels. Mercury in fish is predominantly a problem for pregnant women and those planning pregnancy as mercury can negatively affect the development of a baby's central nervous system (Food Standards Australia New Zealand, 2004). On the other hand, fish is an important part of a pregnant woman's diet because of the numerous nutritional benefits, notably Omega-3 fatty acids, which assist the development of a baby's brain. The Australian Dietary Guidelines advise eating one to two meals of fish per week (NHMRC, 2003).

In March 2004, the national standard setting body, Food Standards Australia New Zealand (FSANZ) issued new dietary advice on mercury in fish. The mass media was used to promote the FSANZ advice. However, using the media as the primary dissemination tool has its limitations. The media has a propensity to focus on negative or sensational information, and because it tends to simplify information is sometimes a problematic vehicle for delivering complex messages.

The NSW Food Authority was established in April 2004, and is responsible for implementing national standards in NSW. While the Authority supported the FSANZ advice it also noticed considerable community confusion around the issue.

## RESEARCH MATERIALS AND METHODS

### Market research

Research by the Food Authority revealed that women in the target group were sacrificing the benefits of fish due to fears about mercury; fears that were driven by inaccurate or 'sensationalist' media reporting. An analysis of media coverage further confirmed this. Over the previous two years (since early 2003) a number of negative

stories had eroded public confidence in fish. This was true for all population groups, not just the target market. Further analysis revealed these stories were highly 'cyclical', and generally ran on a six to eight monthly basis. While print and magazine coverage was generally negative, 'tabloid' television programmes produced a series of highly emotive and extremely negative stories linking miscarriage and conception problems with excessive mercury consumption from fish.

The women featured in the media had been unaware they should reduce their exposure to mercury in fish by avoiding certain species. They were also unaware that they could safely consume other species to maximise the numerous health benefits from fish. This lack of awareness was compounded by misunderstandings among the professionals many women turned to for information. Initial research by the Food Authority revealed widespread misunderstandings among doctors, midwives and dieticians on the issue.

The challenge for the Authority was to develop a campaign that:

- educated women planning pregnancy and pregnant women on how to safely include fish in their diet;
- educated public health professionals on fish consumption during pregnancy;
- encouraged appropriate fish choices at point-of-sale; and
- facilitated balanced media coverage of the issues.

One of the first tasks was to assess awareness levels among the target group about mercury in fish. Roy Morgan was commissioned to conduct a Benchmark Survey to measure issue awareness and understanding. Some 403 females in the 18 to 40 year cohort were interviewed NSW-wide.

The benchmark survey confirmed the Food Authority's concerns. While 64% of women were aware of mercury in fish, the majority didn't know which fish to avoid: 44% couldn't name a fish; 39% named an incorrect fish; and 40% had cut fish from their diet. In most cases they eliminated the wrong types of fish.

The market research confirmed the extent of the problem and confirmed that a strategy to inform women about how to avoid mercury while enjoying the benefits of fish was necessary.

### **Stakeholder partnership**

It was decided that any public education campaign needed broad support from a number of different community, medical, and industry groups to help with message dissemination and to give it credibility in the eyes of the public and the media. It was also felt that these groups could channel the message via their membership more effectively than a single agency. Given that women in the target group often turn to doctors, midwives, and dieticians for information, the support of those professionals was considered critical to the success of the campaign.

The support of the seafood industry was critical as well because industry was a vital outlet for any information relating to mercury in fish.

The Food Authority amassed a coalition with broad government, industry, medical and community focus. Members included: NSW Health; Australian Medical Association; Australian Consumers' Association; Australian Midwives Association; Australian Dieticians' Association; Australian Obstetricians and Gynaecologist Association; Australian Breastfeeding Association; Sydney Fish Market; Master Fish Merchants' Association and Food Standards Australia New Zealand. A major retailer, Coles, agreed to support the campaign by distributing point of sale material in its supermarkets.

All stakeholders agreed that there was an information vacuum and were concerned about negative media creating misunderstandings among consumers, particularly in the target group. Stakeholders agreed that a coordinated message supported by a broad coalition would help correct misunderstanding. Some groups gave specific suggestions.

Midwives explained that because expectant mothers face information overload and message complexity the message should be made portable, for example in the form of a wallet card. Retailers supported point of sale materials endorsed by reputable third parties.

### Campaign criteria for success

Further research determined that the following elements would increase the likelihood of success:

- partnership between industry, government and public health organizations;
- multiple distribution channels, including point-of-sale, media and health professionals;
- careful targeting of the message to 'at-risk' groups;
- message portability, for example, a wallet card which women could carry with them and use when making food choices;
- reinforcing the positive effects of fish consumption;
- recognizing that the cohort of pregnant women is constantly evolving and ensuring that information is continually available to this renewing target market;
- ensuring a strong Internet presence.

A paper in the *Journal of Nutrition Reviews* (Smith and Sayhoun, 2005) analysed various approaches to informing pregnant women about mercury in fish. The paper was critical of campaigns that warned women about high mercury fish without providing balanced messages on the nutritional benefits of fish. There have been examples in other countries of how poorly crafted and targeted campaigns can reduce fish consumption, meaning fewer women consume fish and therefore miss out on its benefits.

An estimated 85,000 women give birth in NSW each year. Food Authority research suggested up to 14,000 of these did not eat any fish during pregnancy because of misunderstandings and fear about the potential risks. Clearly, if more women were armed with scientifically based advice presented in a non-sensational way, they would be able to include fish in their diet without fear.

It was determined that to be truly successful, the campaign had to address a number of criteria:

- **Portability:** The campaign needed to be based on the FSANZ advice, but this was in tabular format and had proved to be difficult to remember. A card was designed that could be carried by pregnant women and used when shopping.
- **Accessibility and multiple channels:** Cards and merchandisers needed to be suitable for both seafood retailers and public health channels; they were waterproof for fish shops and looked suitable for a doctors surgery.
- **Credibility:** Message acceptability by pregnant women and doctors required endorsement from a broad coalition of stakeholders.

### THE CAMPAIGN MESSAGE

The following message was used for the campaign.

*"A Healthy Fish Message for Women Planning Pregnancy and Mums to be...."*

*Fish are full of many nutritional benefits for pregnant women and young children.*

*Fish are a valuable source of protein, minerals, vitamin B12, iodine and are low in saturated fat and contain omega-3 fatty acids. Omega 3 fatty acids are important for the development of the central nervous system in babies, before and after they are born.*



*But eating too much of a good thing when you are a soon-to-be mum or breastfeeding can be bad. That's because some fish contain mercury levels that may harm an unborn baby or young child's developing nervous system.*

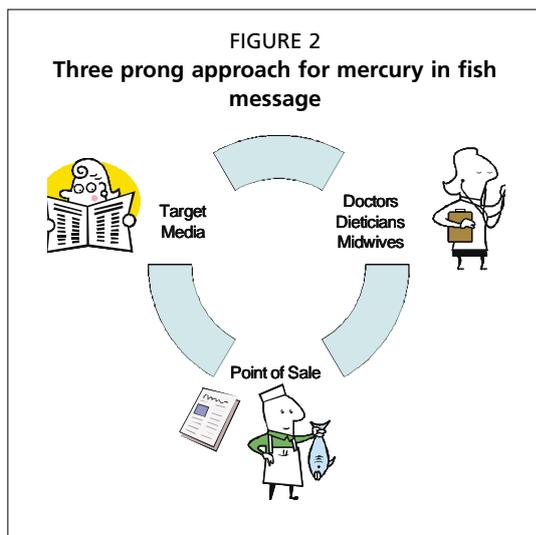
*The good news is you can receive all the benefits of eating fish without the risk if you follow some simple dietary advice.*

*Most fish in Australia have low mercury levels. The following table will help you safely include fish as an important part of a balanced diet."*

TABLE 1

**Dietary advice on fish consumption (Source: Food Standards Australia New Zealand)**

Pregnant & breastfeeding women & women planning pregnancy	Children (up to 6 years)
	1 serve equals 75 grams
1 serve equals 150 grams	
2 – 3 serves per week of any fish and seafood not listed below	
OR	
1 serve per week of Orange Roughy (Sea Perch) or Catfish and no other fish that week	
OR	
1 serve per fortnight of Shark (Flake) or Billfish (Swordfish / Broadbill and Marlin) and no other fish that fortnight	

**MESSAGE DELIVERY**

Previous attempts at communicating this message proved that the media could not be used as the only dissemination tool. The specificity of the target market required well-targeted message delivery tactics. The campaign was spearheaded by a three-prong approach, allowing for the message to be reinforced in multiple ways.

**Partnership with public health professionals**

Public health professionals are often called upon to provide dietary advice for pregnant women. Their involvement in the campaign was critical for message delivery and credibility. The following associations agreed for their logos to be printed on the card, and assisted in distributing materials and publicised the campaign:

- NSW Health
- FSANZ
- Australian Medical Association
- Australian Consumers Association
- Australian Midwives Association
- Australian Obstetricians and Gynaecologists Association
- Australian Dietitians Association
- Australian Breastfeeding Association

**Partnership with industry**

Fish purchase decisions are most often made at point of sale. It was important for this health message to be reinforced by fish retailers so that advice was also available at point of sale. The campaign is supported by the following organizations that committed to distributing the card in their stores:

- Coles Supermarkets
- Sydney Fish Markets
- Master Fish Merchants Association
- NSW Seafood retailers

### The media

The media played an important part in initial message dissemination, but could not be relied on to repeat the information on a long-term basis.

## RESULTS AND DISCUSSION

### Distribution

Five hundred thousand wallet cards were produced, and were mailed to retailers and doctors in a custom designed merchandiser. Posters complemented the cards. All material was provided free of charge and could be replenished from the Food Authority. Table 1 identifies the distribution points for materials. A pregnancy section was also added to the Authority's website, including a series of translated fact sheets. Information was provided through the Authority's contact centre.

TABLE 2  
Distribution points used for the healthy fish consumption card

Group	Distribution point:	
Doctors	⇒	Over 1000 GP practices <sup>1</sup>
	⇒	All 180 Obstetricians and Gynaecologists <sup>2</sup>
Ante-natal clinics, Midwives	⇒	All NSW Public Hospitals
	⇒	1500 Midwives <sup>3</sup>
Dieticians	⇒	3000 Dieticians <sup>4</sup>
Fish Shops	⇒	350 fish shops <sup>5</sup>
	⇒	134 Coles supermarkets
Authority Contact Centre	⇒	Pregnant women, women planning pregnancy
	⇒	Medical professionals

<sup>1</sup> To be cost effective, practices were targeted on advice from AMA Division of General Practices.

<sup>2</sup> List provided by Australian Obstetricians' and Gynaecologists' Association.

<sup>3</sup> List provided by Australian Midwives' Association.

<sup>4</sup> Members of Australian Dieticians' Association, and Direct Mail.

<sup>5</sup> Covers majority of fish shops in NSW. List Provided by Master Fish Merchant's Association and Yellow Pages.

The challenge for the campaign is to ensure longevity of the message. The Authority is consulting with stakeholders to ensure that the cards continue to be available through these distribution points.

### Media activity

Media launches can generate good publicity to leverage a campaign. A launch event was held at the Sydney Fish Market on 11 May 2005. The campaign was officially launched by the NSW Minister for Primary Industries, The Hon. Ian Macdonald. He was joined by: the NSW Australian Medical Association President, Dr John Gullotta, a pregnancy nutritionist Tania Nash, Managing Director of the Sydney Fish Markets, Grahame Turk, and the NSW Food Authority Director General, George Davey.

The campaign was successful in both media reach and balanced messaging. All media reports mentioned the benefits of fish, and information about fish choices when pregnant or planning pregnancy. There was no negative media on the issue.

In summary, the campaign was reported by:

- Newspapers: The Sydney Morning Herald, Daily Telegraph, Sun Herald
- Magazines: Women's Day, NSW Doctor, Sydney Child Australian Table, FoodWeek
- Radio: multiple reports on ABC, 2UE, 2GB, 2NM, Nova

- Television: 'Sunrise-Seven'
- Web-based: FoodWatch, BubHub, FeMail, Birth.com.au, Coles Baby Club

The campaign achieved a successful media turnaround: balanced messages reached a potential audience of 1.5 million through television, radio, print media, and Internet channels.

It is important to note this was not a marketing campaign, but rather a carefully targeted public education campaign to raise consumer awareness about an important health issue. While the Food Authority takes a neutral stand on the sale of fish as a commercial activity, it wanted to see more pregnant women consuming the recommended amount of low mercury fish because of the nutritional benefits.

According to the Sydney Fish Market, previous unbalanced media reports had impacted negatively on fish sales. While figures are not yet available for analysis, the campaign appears to have had positive market impacts. This suggests that the message has been communicated to the target market in a balanced way.

Many pregnant women and public health professionals sought further information from the Food Authority. This is reflected in increased call centre volumes and website enquiries. Feedback on the card and information has been very positive.

## CONCLUSION

The Food Authority's Mercury in Fish education campaign attempted to fill an information void through an innovative three-pronged strategy harnessing a synergistic approach of media, point of sale and stakeholder information dissemination. Overseas evidence suggests this is the first time such an approach has been attempted. The campaign was highly successful in bringing together a coalition of disparate groups to cooperate on an important health issue.

The campaign succeeded in providing balanced information to pregnant women and women planning pregnancy on how to maximise the health benefits of fish while reducing the potential risk from mercury.

Importantly, the campaign also conforms to international best risk management practice as recommended by the World Health Organization. It provides consumers with timely and accurate information to empower them and to enable them to make informed food choices.

## REFERENCES

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