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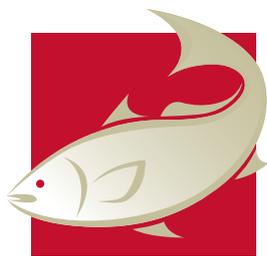
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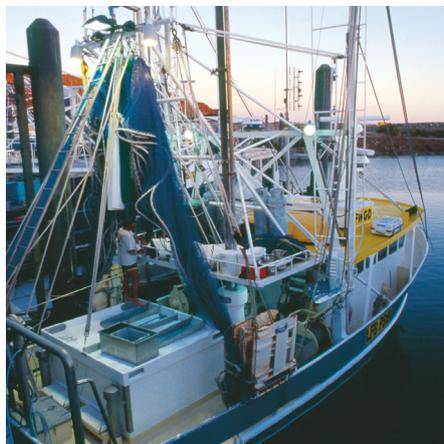
Industry Guidelines

for Seafood Health and Nutrition Messages

January 2010



AUSTRALIAN
SEAFOOD
COOPERATIVE
RESEARCH CENTRE



*Prepared by the Centre of Excellence for Science, Seafood and Health (CESSH)
Curtin Health Innovation Research Institute, Curtin University of Technology.
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Industry Guidelines for Seafood Health and Nutrition Messages

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Government of Western Australia
Department of Commerce



Forward

It is with great pleasure that I preface these guidelines.

We all know that ‘seafood is good for you’. Industry research as far back as 1995 showed that the general public had got that message, but when asked exactly what was “good’ about it people were generally very vague. What these guidelines do is make it clear what can be said about the health benefits of seafood consumption and with what level of confidence a particular statement can be made.

This confidence is critical for labelling as new laws are very strict about what claims can be made, particularly in regard to health benefits. The Western Australian Fishing Industry Council (WAFIC) has been a strong supporter of truth in labelling, having led the drive for the standardisation of fish names and country-of-origin labelling so that the public can be confident that fish is properly described.

Using this guide will allow people in the industry to take that message one step further. The guide complements previous work such as the CSIRO publications ‘Seafood the Good Food’ and the Australian Seafood Handbook; and the Fisheries Research and Development Corporation publication ‘What’s so Healthy about Seafood’.

The Western Australian professional fishing industry has supported the Centre of Excellence for Science, Seafood and Health (CESSH) since its inception and is proud to be a partner in the Australian Seafood Co-operative Research Centre.

This is one of the first of what we hope will be a suite of informed and well-researched documents that will allow the discriminating consumer to make the best possible decisions when selecting and preparing their seafood.

This guide will be your opportunity to pass on the message that seafood IS good for you – please use it and help the eight out of ten people who buy their seafood to make the best possible choice.



Kim Colero
Chairman WAFIC

“ This guide will be your opportunity to pass on the message that seafood IS good for you ”



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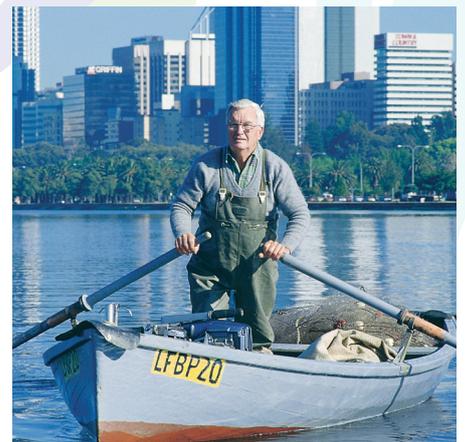
How to use this guide

This guide has been written to assist the seafood industry to recognise and promote health and nutrition messages regarding seafood consumption and health.

The guide summarises relevant regulations, legislation and guidelines governing use of health and nutrition messages to promote seafood on food labels and in advertising material.

Although this guide provides the main points that should be considered when promoting the health benefits of seafood, it is recommended that the original documents are referred to when planning any labelling or advertising materials. A list of relevant websites and references are provided at the end of this guide

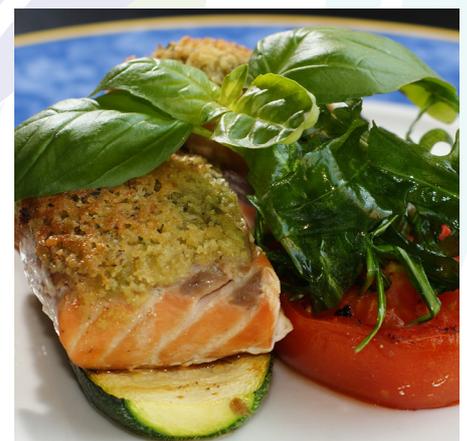
The guide also summarises scientific evidence regarding the health benefits of seafood consumption.



Food labels

2.1 Food labelling and relevant legislation

- What can and can't be said on food labels and advertising is covered primarily by the Australia and New Zealand Food Standards Code (developed by Food Standards Australia & New Zealand - FSANZ). The Code applies to all food sold and prepared for sale in Australia, and food imported into Australia. The Code sets out the requirements for food and beverage labelling in Australia. Enforcement and Interpretation of the Code is the responsibility of State/Territory Health Departments within Australia. Food labelling compliance may also be monitored by the Australian Competition and Consumer Commission (ACCC), State/Territory Department of Health Food and Safety units and Local Government food inspectors and Environmental Health Officers.
- While FSANZ offers assistance navigating the Code, they do not provide approval of labels or food compliance of any type. FSANZ can only provide information about the Code and does not provide legal advice or interpretation of the Code.
- User Guides are available for the Code, however these have no legal power. The Code of Practice on Nutrient Claims in Food Labels and in Advertisements, developed by FSANZ, may also be a relevant useful document but is not legally enforceable.
- States and Territories do not have to accept every part of the Code, and each State and Territory has responsibility for regulating its own food matters (e.g. Western Australia: Food Act 2008, South Australia: Food Act 2001).
- As well as the Food Standards Code and the relevant State or Territory legislation, Part V of the Trade Practices Act (TPA) (Consumer Protection) covers misleading or deceptive conduct and false or misleading representations and should be considered when planning food labels or advertisements. The TPA is Commonwealth legislation which overrules State & Territory laws.
- View the Food Standards Code
 - www.foodstandards.gov.au/foodstandards/foodstandardscode
- View the Trade Practices Act
www.comlaw.gov.au/comlaw/management.nsf/lookupindexpagesbyid/IP200401339?OpenDocument



2.2 Health claims/messages

- Health claims can be described as claims, words or statements on food labels or advertising materials that refer to the potential for a component of a food or the food itself to assist in reducing the risk of, or improving existing cases of, a disease or health condition.
- Currently, health claims are not generally permitted on food labels or advertising in Australia (claims related to folate are the only current exception).
- Health claims on food labelling have been under review for several years, however as of the 23rd of October 2009 food labelling law and policy in its entirety is being reviewed, which will further delay any new outcomes for health claims.
- Health Claims are covered by Standard 1.1.A.2 of the Food Standards Code. According to Standard 1.1.A.2, food labels and advertisements for food must not:
 - make a claim or statement that the food is a slimming food or has intrinsic weight-reducing properties;
 - make a claim for therapeutic or prophylactic action or a claim described by words of similar import;
 - include the word 'health' or any word or words of similar import as a part of or in conjunction with the name of the food;
 - use any words, statement, claims, express or implied, or design that directly or by implication could be interpreted as advice of a medical nature from any person; or
 - contain the name of, or a reference to, any disease or physiological condition. There are exceptions to this rule prescribed by the Code (e.g. folate & neural tube defects in babies).
- Information on the omega-3 content of fish and seafood can be made available to the public. Pamphlets which include factual information on the benefits of omega-3 can also be made available to the public, but the information must not be linked to seafood (or any food). The consumer must make the link between omega-3 and seafood for themselves.

Examples

Food labels:



Correct

This product contains 1500mg of omega-3 per serve.



Incorrect

Seafood contains omega-3 which prevents cardiovascular disease.

Informational pamphlets:

Pamphlet 1 (Health benefits of omega-3)

Omega-3 may:

- reduce the risk of heart disease
- reduce arthritis symptoms
- reduce the risk of some types of cancer



Pamphlet 2 (Foods containing omega-3)

Omega-3 is found in most fish and seafood, including Atlantic salmon, mussels and sardines.



Pamphlet 3 (Health benefits and foods containing omega-3)

Omega-3s are good for your health. They can prevent heart disease and are found in fish, other seafood and walnuts.



Food labels

2.3 Nutrition information panels

- According to Standard 1.2.8 of the Food Standards Code, most packaged foods are required to display a nutrition information panel (NIP).
- Some exemptions include foods such as:
 - fish that comprise a single ingredient or category of ingredients;
 - unpackaged food;
 - food in a small package (smaller than 100 sq cm);
 - food made and packaged from the premises from which it is sold;
 - food that is packaged in the presence of the purchaser; and
 - food delivered packaged, and ready for consumption, at the express order of the purchaser.
- These exemptions do not apply if there is a nutrition claim being made in relation to the food (see section 2.4)
- NIPs must carry the following information:
 - the number of servings of the food in the package expressed as either:
 - the number of servings of the food, or;
 - the number of servings of the food per kg (or other units as appropriate)
 - the average quantity of the food in a serving (in grams for solids or millilitres for liquids);
 - the unit quantity of the food;
 - the average energy content (in kilojoules or kilocalories), of a serving of the food and of the unit quantity of the food;
 - the average quantity (in grams) of protein, fat, saturated fat, carbohydrate and sugars in a serving of the food and in a unit quantity of the food;
 - the average quantity of sodium (in milligrams or millimoles) in a serving of the food and in the unit quantity of the food; and
 - the name and the average quantity of any other nutrient or biologically active substance in respect of which a nutrition claim is made, expressed in grams, milligrams or micrograms or other units as appropriate, that is in a serving of the food and in the unit quantity of the food.

When is an NIP required?



A package of frozen fish with added ingredients (such as crumbed fish) does require an NIP.



Frozen fish which comprises a single ingredient, such as frozen salmon, does not require an NIP.



Fish sold at a deli counter, packaged in the presence of the purchaser does not require an NIP.

Food labels

2.3 Nutrition information panels (contd.)

- FSANZ can provide nutritional information for a wide number of foods, however laboratory testing can provide accurate results and protect against legal action. There are some private companies which offer assistance with NIP generation to comply with relevant codes and laws.
- Visit www.foodstandards.gov.au/thecode/nutritionpanelcalculator
- The NIP should be set out as follows:

NUTRITION INFORMATION		
Servings per package: (insert number of servings)		
Serving size: g (or mL or other units as appropriate)		
	Quantity per Serving	Quantity per 100 g (or 100 mL)
Energy	kJ (Cal)	kJ (Cal)
Protein	g	g
Fat, total	g	g
- saturated	g	g
Carbohydrate	g	g
- sugars	g	g
Sodium	mg (mmol)	mg (mmol)
(insert any other nutrient or biologically active substance to be declared)	g, mg, µg (or other units as appropriate)	g, mg, µg (or other units as appropriate)



Food labels

2.4 Nutrition claims

- Nutrition claims are covered by Standard 1.2.8 (Nutrition Information Requirements) of the Food Standards Code. This Standard covers the nutritional information that is required to be provided on food labels, and what specific conditions you must comply with when making claims.
- A nutrition claim refers to a representation that states, suggests or implies that a food has a nutritional property. This may be general or specific, and expressed affirmatively or negatively.
- If a nutrition claim is made in relation to a food, a NIP must be displayed on the label of the food. If the food is not required to carry a label (such as those exemptions listed in Section 2.3), a NIP must be displayed on or in connection with the display of the food or provided to the purchaser on request.
- If a nutrition claim is made, the NIP must include the name and the average quantity of the nutrient that is in a serving of the food. This quantity must be expressed in grams, milligrams or micrograms (or other units as appropriate).
- If an advertisement for food contains a nutrient claim the label on the food to which the advertisement applies must include a NIP.
- The claim must apply to the food in the form in which it is intended to be consumed. If the claim's accuracy depends on the consumer's method of preparation then the label must include information that will enable the consumer to prepare the food so that it meets the nutrition claim.
- If a nutrition claim is being made about a food which is naturally or intrinsically high or low in the nutrient about which the claim is being made then it must be clear that the claim refers to the class of food and not only the brand on which the claim appears.
- For more information see the User Guide to Standard 1.2.8 – Nutrition Information Requirements and the Code of Practice for Nutrient Claims in Food Labels and in Advertisements.

Example



As shown in Section 2.3, some foods do not require an NIP. However, if a nutrition claim is made, a NIP must be displayed.



For example, fish which comprises a single ingredient, such as frozen salmon, does not require a NIP. However, if a nutrition claim is made in regards to that item, a NIP must be available to the purchaser. A pamphlet containing a NIP would fulfil this requirement.

Example



Atlantic Salmon contains omega-3.



Brand X Atlantic Salmon contains omega-3.

\$15.99 per kg

\$15.99 per kg

Lake Victoria Wild Caught
Salmon - Thawed
PRODUCT OF NEW ZEALAND



Brain food

FISH

Twice a week

Silver Cobble

\$31

Lake Argyle Wild Caught
Fresh Fish
PRODUCT OF AUSTRALIA

Food labels

2.5 Nutrition claims and omega-3

- Nutrition claims regarding omega-3, and requirements for NIPS are covered by the Food Standards Code, Standard 1.2.8 clauses 5 and 13.
- A nutrition claim may be made in relation to the omega-3 fatty acid content of fish or fish products with no added saturated fatty acids if it contains:
 - 200 mg alpha-linolenic acid (ALA) per serving; or
 - 30 mg total eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) per serving.
- Products with added saturated fatty acids must also meet the following criteria:
 - the total of saturated fatty acids and trans fatty acids must be no more than 28 per cent of the total fatty acid content of the food; or
 - the food contains no more than 5 g of saturated fatty acids and trans fatty acids per 100 g of the food.
- A nutrition claim may be made that a food is a good source of omega-3 fatty acid if the food satisfies the requirements above and contains no less than 60 mg total EPA and DHA per serving.
- If the nutrition claim is made, the NIP must indicate the source of omega 3 fatty acids, namely, ALA, DHA and/or EPA.
- When a nutrition claim using the word 'omega' is made, the word 'omega' must be qualified by the type of omega fatty acid present. This qualification appears immediately after the word 'omega' (eg 'Omega-3', 'Omega-6' or 'Omega-9').
- A nutrition claim must not be made in relation to the omega-6 or omega-9 fatty acid content of a food, unless the:
 - total of saturated fatty acids and trans fatty acids content of the food is no more than 28 per cent of the total fatty acid content of the food; and
 - fatty acid in respect of which the nutrition claim is made comprises no less than 40 per cent of the total fatty acid content of the food

Example

Fish or seafood (with no added saturated fat) which contain more than 30mg total of EPA and DHA per 100g can make an omega-3 source claim.



This product is a source of omega-3.

Fish or seafood (with no added saturated fat) which contain more than 60mg total of EPA and DHA per 100g can make a good omega 3 source claim.



This product is a good source of omega-3.

The NIP on products with an omega-3 claim must be set out in accordance with the example opposite (nutrition information declaration).



2.5 Nutrition claims and omega-3 (contd.)

- For nutrition claims made regarding omega-3, omega-6 or omega-9 fatty acids the NIP must include declarations of all the trans, polyunsaturated and monounsaturated fatty acids as set out below:

NUTRITION INFORMATION		
Servings per package: (insert number of servings)		
Serving size: g (or mL or other units as appropriate)		
	Quantity per Serving	Quantity per 100 g (or 100 mL)
Energy	kJ (Cal)	kJ (Cal)
Protein	g	g
Fat, total	g	g
- saturated	g	g
- *	g	g
- trans	g	g
- *	g	g
-polyunsaturated	g	g
- *	g	g
- monounsaturated	g	g
- *	g	g
Carbohydrate	g	g
- sugars	g	g
Sodium	mg (mmol)	mg (mmol)
(insert any other nutrient or biologically active substance to be declared)	g, mg, µg (or other units as appropriate)	g, mg, µg (or other units as appropriate)

* sub-sub-group nutrient

2.6 Vitamin and mineral claims

- Standard 1.3.2 (Vitamins and Minerals) of the Food Standards Code covers claims regarding the presence of vitamins and minerals in a food.
- Claims can be made regarding the presence a vitamin or mineral in a food if certain conditions are met:
 - The claim must be specifically permitted in the Code; or
 - If the vitamin or mineral is listed*, the food is a claimable food**, and a reference quantity of the food contains at least 10% of the Recommended Daily Intake (RDI)*** or Estimated Safe and Adequate Daily Dietary Intake (ESADDI) for that vitamin or mineral.

** Claimable foods include a food which is at least 90% by weight a primary food (which includes fish). Refer to the standard for processed seafood products.

*** Information on RDIs can be found on the NHMRC website www.nrv.gov.au/nutrients

Example

Fish X contains 2 mg of Zinc per 150g serving size. For males, the RDI for Zinc is 14mg; for females it is 10mg. The 150g serving of fish contains more than 10% of the RDI for Zinc for both males and females, and Zinc is a listed mineral in the Code. A nutrient claim could be made for fish X.



Fish X is a source of zinc

Food labels

2.6 Vitamin and mineral claims (contd.)

- To make a claim that a food is a good source of a vitamin or mineral, the reference quantity of the food must contain no less than 25% of the RDI or ESADDI for that vitamin or mineral.
- When a claim is made in relation to the presence of a vitamin or mineral in a food, the label or NIP must include a statement containing the following information:
 - serving size;
 - number of servings per package;
 - the vitamin or mineral in respect of which the claim is made;
 - the average quantity of the vitamin or mineral in 100g or 100mL of the food as the case may be; and
 - the proportion of the RDI, of that vitamin or mineral contributed by one serving of the food; or
 - the average quantity of the vitamin or mineral for which an ESADDI has been prescribed in the Food Standards Code in a serving of the food.
- Example:

NUTRITION INFORMATION		
Servings per package: 1		
Serving size: 150g		
	Quantity per Serving	Quantity per 100 g
Energy	kJ (Cal)	kJ (Cal)
Protein	g	g
Fat, total	g	g
- saturated	g	g
Carbohydrate	g	g
- sugars	g	g
Sodium	mg (mmol)	mg (mmol)
Zinc	2mg (16% of RDI)	1.33mg
* Percentage of Recommended Dietary Intake (RDI)		

- Vitamin and mineral claims cannot make comparison claims (with other foods), unless permitted by the Food Standards Code. A claim must not be made if such a claim is prohibited in the Code.
- Listed vitamins and minerals are vitamin A, thiamin (vitamin B1), Riboflavin (vitamin B2), Niacin, Folate, vitamin B6, vitamin B12, Biotin, Pantothenic Acid, vitamin C, vitamin D, vitamin E, vitamin K, calcium, chromium, copper, iron, iodine, magnesium, manganese, molybdenum, phosphorus, selenium, zinc.



2.7 Country of origin labelling

- Country of origin labelling provides consumers with information on the country/countries where food has been grown, manufactured, produced, or packaged. A country of origin claim is any words or pictures on labels, packages or advertising that makes or implies a statement or claim about origin of the goods.
- Country of origin food labelling is covered by both the Food Standards Code Standard 1.2.11 (Country of Origin Requirements), and the Trade Practices Act. Other pieces of legislation in different states/territories may also cover food labelling.
- Standard 1.2.11 does not apply to food sold to the public by restaurants, canteens, schools, caterers or self-catering institutions where the food is offered for immediate consumption.
- According to the Food Standards Code, all packaged and some unpackaged foods must be labelled with country of origin.
- Packaged food is required to be labelled with either:
 - a statement that identifies where the food was made or produced; or
 - that identifies the country where the food was made, manufactured or packaged for retail sale; and
 - a statement to the effect that the food is constituted from ingredients imported into that country or from local and imported ingredients as the case may be.
- If fish or seafood are sold unpackaged, a label must be displayed on or in connection with the food which:
 - identifies the country or countries of origin of the food; or
 - contains a statement indicating that the foods are a mix of local and/or imported foods.
- If fish and seafood is not sold in a package, and the label is in connection with the food (not on), the following conditions must be met:
 - the size of type on the label must be at least 9 mm; or
 - if the food is in a refrigerated assisted service display cabinet, the size of type on the label must be at least 5 mm.
- Refer to Standard 1.2.9 for further information on legibility requirements for food labels.
- While country of origin claims are not mandatory under the Trade Practices Act, those that are made must be accurate.
- The Trade Practices Act prohibits claims that may mislead or deceive, or making false representations about the origins of food.
- For products to make a 'Made in country of origin' claim, the following conditions must be met:
 - the goods were substantially transformed in the country claimed to be the origin; and
 - 50 per cent or more of the costs of production must have been carried out in that country.

Food labels

2.7 Country of origin labelling (contd.)

- For goods to make to 'Product of country of origin' claim, the following conditions must be met:
 - the country of the claim must be the country of origin of each significant ingredient or significant component of the goods; and
 - all, or virtually all, processes involved in the production or manufacture of the goods must have happened in that country.
- If a product does not comply with the above criteria, other qualifying statements may be used, such as 'Packaged in Australia', 'Made/manufactured in Australia from imported ingredients' or 'Australian Owned'.

For more information visit:

- Food Standards Code: www.foodstandards.gov.au/foodstandards/foodstandardscode
- Trade Practices Act: www.comlaw.gov.au/comlaw/management.nsf/lookupindexpagesbyid/IP200401339?OpenDocument

2.8 Australian Fish Names Standard AS SSA 5300-2009

The Australian Fish Names Standard was prepared by Seafood Services Australia's (SSA) Fish Names Committee. The Standard 'defines standard fish names for use in Australia and specifies when standard fish names are to be used.' It is intended to be used by those involved with fish or seafood in Australia.

To comply with the Standard, fish sold directly to consumers must be identified at the point of purchase by the Standard Fish Name (SFN) for that species. The scientific name also may be specified in addition to the SFN. When fish are not sold directly to consumers, the fish may be identified by either the SFN or the scientific name for that species. Publications written by scientists, recreational fishers, chefs, media, teachers, fisheries managers, and others must use either the SFN or the scientific name for that species to comply with the Standard.

A SFN 'may cover a single species or all species in a particular scientific family or group of fish'. According to the Standard it is recommended that fish are identified by the SFN for that particular species only.

2.8 Australian Fish Names Standard AS SSA 5300-2009 (contd.)

However there are some circumstances that the SFN for the scientific group or family to which a fish belongs may be used instead. These are:

- the fish does not have a SFN for that particular species; or
- the fish is in a batch of different species of fish, all of which are from the same scientific group or family; AND
- using the SFN for the scientific group or family to which a fish belongs does not mislead, misrepresent or confuse the identification of the fish.

The group name may be capitalised to indicate that it is a group name. If a group name in the Standard shows a pluralisation in brackets this indicates that the group name is shared with an individual species name.

If a species does not have an SFN specified in the Standard, it may be identified but a name that is in common use for that species in Australia or overseas. If an alternative fish name is used, SSA must be notified within 30 days. Obsolete fish names may be used if the correct SFN is displayed more prominently and in larger text above the obsolete name. The obsolete name must be contained in brackets.

Source: Australian Fish Names Standard AS SSA 5300,
www.seafood.net.au/fishnames/standard.php

2.9 Glycaemic Index (GI)

- There is currently no reference in the Food Standards Code regulating Glycaemic Index (GI).
- GI ranks the extent to which blood sugar levels are raised after consumption of carbohydrates in a food. High GI foods are those which are digested faster and cause a spike in blood sugar levels.
- To be considered 'low GI,' the GI value of the food must be below 55.
- To be considered 'medium GI', the GI value of the food must be between 56 and 69.
- Foods with a GI value of 70 and above are considered 'high GI'.
- A GI claim is voluntary and currently requires no additional information for the NIP.
- The GI level of foods can be tested by a food laboratory.
- More information on GI and GI testing can be found at www.glycemicindex.com or www.gisymbol.com.au



Food labels

2.10 Other labeling considerations

2.10.1 Trade Practices Act

There are several areas to consider for food labels and advertisements to comply with the Trade Practices Act. These can be summarised as:

- words, images and the overall impression;
- target audience; and
- qualifying claims, fine print and disclaimers.

For compliance with the Trade Practices Act, the ACCC considers that food and beverage labelling descriptors fall broadly under the following categories:

- **Food type assurance claims:** These claims refer to specific assurances about the quality or characteristics of particular foods (e.g. kosher, vegan);
- **Process/preparation/production claims** (similar to previous): Claims regarding the specific processes which the food has undergone must be represented accurately to the consumer. This may refer to production claims (e.g. organic), preparation claims (e.g. chilled), and process claims (e.g. non-sweetened).
- **Origin claims:** Food labels or advertisements which contain claims regarding the origin or source of food should be accurate (see section 2.7 of this guide). This includes claims that a food is a 'Product of', 'Made in', and 'locally grown' and also claims regarding the origin of a product from a geographical area. Consider what the consumer may decide when reading this claim. For more information when making an origin claim, read the *Food and Beverage Industry: Country of Origin Guidelines to the Trade Practices Act* guideline; and
- **Standard/style/select claims:** The ACCC describes these claims as those which imply a relationship with a particular standard, style or product selection. If there is an objective component to the claim it must be substantiated before it is made to consumers.

Claims that foods are pure, fresh or natural may be considered misleading or deceptive if the food is not what a consumer would understand to be 'pure', 'fresh', or 'natural'. For example, the word 'pure' implies that there are no added ingredients. This would apply to a single ingredient food. The word 'fresh' would imply that the food had not been canned, cured, dehydrated, frozen, processed or preserved. The term 'natural' (or similar words or combinations of words which include 'natural') may suggest to consumers that the product is made of natural ingredients, with no added chemical. The use of the words is still misleading if used as the brand name of a food that would not be considered 'pure', 'fresh' or 'natural'.



2.10 Other labelling considerations (contd.)

The ACCC also flags the use of the terms 'real', 'true' and 'genuine', as these terms may suggest that other similar foods or products may not have the same qualities as the one referred to in the advertisement/label.

- 'Puffery'
The ACCC describes a fifth category, 'puffery'. This describes claims which may fanciful, vague or exaggerated and would not reasonably be considered meaningful to consumers or their intentions to purchase.

2.10.2 Images and pictures

When using images and pictures on labels or in advertisements, consideration should be given to the impression that may be made on the consumer. Images which are considered to give a misleading impression of the product may breach the Trade Practices Act.

2.10.3 Checklist: To avoid breaching the Trade Practices Act

When designing or reviewing food labeling and advertisements, the following points should be considered:

- what impression is given to consumers about the predominant ingredients of the product? Is this impression accurate?
- are there any aspects of the labelling or packaging which need stronger emphasis to accurately reflect the product?
- what overall impression do the words and images used create? How will your target audience interpret this? What conclusions might consumers draw from your words and images?
- what might consumers miss or not understand?
- if your label uses a disclaimer or qualification, is it prominent and clear? Will it be sufficient to dispel any misleading impressions?
- how would a reasonable consumer react to your label/advertisement?

Source: ACCC Food Labelling Guide
www.accc.gov.au/content/index.phtml/itemId/877504



Evidence relating to health conditions and seafood consumption

The following provides an overview of evidence from studies published in peer-reviewed journals associated with seafood consumption and health. The level of evidence supporting each health issue was estimated using the following criteria:

A	High	<ul style="list-style-type: none"> ■ Further research is very unlikely to change our confidence in the estimate of effect ■ Several high-quality studies with consistent results ■ In special cases: one large, high-quality multi-centre study
B	Moderate	<ul style="list-style-type: none"> ■ Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate ■ One high-quality study ■ Several studies with some limitations
C	Low	<ul style="list-style-type: none"> ■ Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate ■ One or more studies with significant limitations ■ Any estimate of effect is very uncertain

3.1 Strongest evidence (A)

- Regular fish consumption is associated with a significantly reduced risk of total mortality for both men and women.
- 1-2 serves fish/wk, especially those high in n-3 polyunsaturated fatty acids (PUFAs), decreases the risk of total mortality by 17%.
- 20% decreased risk in total mortality associated with at least 1 serve fish/wk in men.
- Fish intake is beneficial to heart health.
- Adequate intake of n-3 PUFAs decreases the incidence of cardiovascular disease (CVD). Furthermore 2-3 fish meals/wk is protective against CVD.
- Good evidence that fish consumption is protective against CVD and chronic respiratory disease in males.
- 1 serve fish/wk (20gm/day) reduces the risk of coronary heart disease (CHD).
- Decreased risk of CHD by:
 - 31% if fish consumed 3-4 meals/wk; and
 - 32% decreased risk if consumed at least 5 /wk.
- 1-2 serves fish/wk (especially species high in n-3 PUFAs) reduces the risk of:
 - coronary death by 36%;
 - coronary heart failure by 20%;
 - arterial fibrillation (28% reduced risk for 1-4 serves/wk, 31% decreased risk for at least 5 serves /wk); and
 - myocardial infarction.
- Higher levels of fish consumption are associated with a lower risk of CHD in diabetic women.
- 1 serve fish/wk (white or oily fish) reduces the risk of stroke.



Evidence relating to health conditions and seafood consumption

3.1 Strongest evidence (A) (contd.)

- Reduced risk of ischemic stroke:
 - 1-4 serves fish/wk decreases risk by 27%.
 - At least 5 serves fish/wk decreases risk by 30%.
- However, there is a 44% increased risk of ischemic stroke for more than 1 serve/wk of fried or sandwich fish.
- For women, oily fish intake was significantly lower in those who subsequently experienced a stroke.
- Evidence that fish consumption is protective against rheumatoid arthritis and ulcerative colitis in males.
- At 30yr follow-up, men who ate no fish had a 2-3 fold higher frequency of prostate cancer than those who ate moderate or high amounts of fish.
- At least 4 serves fish/wk associated with decreased risk of prostate cancer (with the strongest association with metastatic cancer - Relative Risk (RR) 0.56).
- Evidence that fish consumption is associated with a decreased risk of lung cancer mortality in men (independent of cigarettes, animal fat minus fish fat, vegetable and fruit consumption).
- Higher consumption of fish associated with lower risk of islet autoimmunity precursor for Type 1 diabetes in children at increased risk of Type 1 diabetes.
- Negative association between a diet rich in fruit, vegetables and fish, and the risk of Congestive Obstructive Pulmonary Disease (COPD).
- Women of childbearing age should consume at least 2 serves of fish /wk.
- Pregnant and lactating mothers should consume up to 12oz of a variety of fish each week (incl. shellfish low in mercury).
- Fish consumption does not adversely affect infant gestation and birth size at a population level.
- Evidence that at least 340 g/wk maternal seafood intake is beneficial to child cognitive development.
- Low maternal seafood intake during pregnancy could lead to adverse effects on neurodevelopment.
- Occurrence of preterm delivery varied from 7.1% in the group who never consumed fish, to 1.9% in those consuming fish at least 1/wk.
- Low maternal fish consumption was a strong risk factor for preterm delivery and low birth weight.
- Small amounts of n-3 PUFAs (provided as fish or fish oil) is protective against preterm delivery and low birth weight.
- Consumption of n-3 PUFAs during pregnancy is essential for optimum foetal neural development.



3.2 Moderate evidence (B)

- Strong evidence that increased consumption of n-3 PUFAs reduces risk of all-cause mortality.
- Ingestion of n-3 PUFA supplements has consistently shown a reduction in joint tenderness and the amount of morning stiffness in those with rheumatoid arthritis.
- Good evidence that regular fish intake is beneficial for management of inflammatory diseases.
- Moderate to high intake of fish appears to be protective against rheumatoid arthritis.
- Fish consumption in the first year of life lowers the risk of asthma and allergic rhinitis in childhood.
- Risk of allergic rhinitis substantially lower in children who had fish during the first year of life (RR 0.025) compared with children who had fish later in life (RR 0.060).
- Early introduction to fish shows consistent negative association with risk of allergic rhinitis.
- Results suggest that early intake of fish protects against airway disease in early life.
- Children born to mothers with a history of asthma had a reduced risk of developing asthma when mothers ate oily fish at least once month during pregnancy compared with no consumption.
- In contrast, fish sticks (source of trans fats) consumption during pregnancy increased asthma risk in children (OR 2.04).
- Traditional fish-based diets appear to be protective against CVD.
- Daily intake of marine fatty acids associated with 24% decreased risk in metastatic cancer.
- Men who consumed at least 1 serve fish/wk relative risk of sudden death reduced.
- Higher consumption of fish associated with decreased risk colorectal cancer for women.
- Maternal intake of very-long-chain-fatty-acids during pregnancy and lactation may be favourable for mental development of children.
- Compared with low intake (21mg/d), high intake (407mg/d) of n-3 PUFAs was associated with fewer depressive symptoms in adults (OR 0.46).
- The level of pollutants in seafood was, in general, very low.
- Benefits of seafood consumption far outweigh the risks associated with possible pollutants.
- Fish low in mercury and high in n-3 PUFAs are recommended.

Evidence relating to health conditions and seafood consumption

3.3 Some evidence but more research required (C)

- Fish is more beneficial than fish oil in combating CVD and all cause mortality.
- Fish oil acids may reduce potentially fatal arrhythmias in people at high risk.
- The influence of dominant male (whether child or adult) within the family unit should be considered in any intervention to increase regular seafood consumption.
- Nutritional education for pregnant women required.
- Fish consumption associated with increased length of gestation in women with a low risk of adverse pregnancy outcomes.
- Higher maternal fish intake during pregnancy associated with longer gestation, increased birth weight, reduced risk of intrauterine growth retardation and lower prevalence of pregnancy-induced hypertension.
- An average intake of 400 mg/d of n-3 PUFAs may reduce depression.
- Fish consumption may be associated with slower cognitive decline with age.
- Greater seafood consumption predicted lower lifetime rates of bipolar disorders.
- There is limited evidence around seafood, fish oil or supplements in the management of attention disorders such as ADHD, however available evidence is promising.
- Brains of Alzheimer patients have lower DHA in gray matter. N-3 PUFAs retard the decline in cognition over time.
- National fish advisories overemphasis risks and undervalue benefits of fish consumption.
- Interventions seeking to promote seafood as an integral part of a healthy diet should address existing negative attitudes and beliefs around the storage and preparation of seafood.
- Strategies directed at parents and children should include experimental hands on components to encourage experimentation, particularly focusing on use of, preparation of and the variety of lower cost seafood available.
- Food involvement correlated positively with fish consumption intention and frequency.
- Dietary fish and weight loss had significant independent and additive effects on 24 hour ambulatory blood pressure and heart rate in overweight persons.

3.4 Consumer behaviour in relation to fish and seafood consumption

- Perceived cost, freshness, quality, availability, taste and easy preparation were considered to be the main influences in consumer choice of fish and seafood products. (B)
- The lowest income households had the lowest fish consumption. (B)
- The highly processed product varieties (battered and crumbed fish and fish in sauce dishes) were often popular among families and perceived as easy and convenient to cook. (B)
- Odours common to fish and seafood often a deterrent to consumption. (B)
- Fresh fish and seafood preferred to alternative products (processed, smoked, canned and frozen products). (C)
- Presence of bones and price influence purchase type but not intention to purchase. (C)
- The presence of children in the households led to lower fish consumption. (C)

3.5 Marketing and advertising

- Food advertising directed at children predominantly featured snack foods/fast foods and confectionery. (A)
- Modern marketing techniques had a strong influence on food choice. (B)
- Changing the food advertising environment during children's television viewing time to an environment where nutritious foods are promoted and less healthful foods unrepresented would lead to the normalisation and reinforcement of healthy eating. (B)





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Websites

FSANZ

www.foodstandards.gov.au

The Food Standards Code

www.foodstandards.gov.au/thecode

The ACCC

www.accc.gov.au/content/index.phtml/itemId/142

The Trade Practices Act

www.comlaw.gov.au/comlaw/Legislation/ActCompilation1.nsf/0/0769050E539E97DACA257678007F8AA2?OpenDocument

Information on the review of food labelling

www.health.gov.au/internet/main/publishing.nsf/Content/review-food-labelling-law-&-policy

For information on RDI's

www.nrv.gov.au/nutrients

Australian Fish Names

www.fishnames.net.au

For more information on Glycaemic Index

www.glycemicindex.com
or
www.gisymbol.com.au

Food Legal – Food law experts

www.foodlegal.com.au/resources/regulationoverview/FoodLabellingInformation/

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