

**Position Statement**

*Phytosterol/stanol enriched foods*

**Background**

Epidemiological data have shown a continuous linear relationship between low-density lipoprotein cholesterol (LDL-cholesterol) levels and coronary heart disease (CHD) events<sup>1,2</sup>. Studies indicate that incorporating plant sterols into the diet may be an effective method of lowering total and LDL-cholesterol levels. By consuming plant sterols daily, adults may lower their LDL-cholesterol levels by around 10% depending on the age of the person. A reduced blood cholesterol level is associated with a reduced risk of CHD and stroke.

The Heart Foundation reviewed the relevant scientific research and developed the publication *Summary of evidence on phytosterol/stanol enriched foods* and associated *Position Statement*. Both papers are available from [www.heartfoundation.org.au](http://www.heartfoundation.org.au). The *Position Statement* may also be obtained by calling **13 11 12**.

**What are plant sterols?**

Plant sterols (or phytosterols) are a naturally occurring part of all plants. They are mainly found in vegetable oils but are also present in smaller amounts in nuts, legumes, grains, cereals, wood pulp and leaves. The main sources of plant sterols added to foods in Australia are soybean oil or tall (pine) oil.

**What does the Heart Foundation recommend for adults with high blood cholesterol?**

To lower LDL-cholesterol the Heart Foundation recommends adults consume 2 to 3 grams of plant sterols per day from plant sterol enriched foods. Consuming more than this amount will not do harm but will not give any additional benefits.

In Australia, foods approved for enrichment with plant sterols are: margarine spreads, breakfast cereal, low-fat yoghurt and low-fat milk.

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**Who should eat plant sterol enriched foods?**

These products will benefit those people at risk of cardiovascular disease, and in particular those with high blood LDL-cholesterol levels. People with familial hypercholesterolaemia or diabetes should also choose plant sterol enriched foods.

**How will plant sterol enriched foods affect a patient's statin treatment?**

Plant sterols are not meant to replace cholesterol lowering drugs. If patients are already on cholesterol lowering medication, they should continue taking it. Research shows that plant sterol enriched foods work together with statins, to have an even greater impact on lowering LDL-cholesterol levels.

**How safe are plant sterols?**

There is no evidence of safety concerns associated with the short-term (12 months) consumption of plant sterols. Long-term safety studies have not yet been performed.

Plant sterol enriched foods can be included in a healthy eating plan. The recommended intake is 2 to 3 grams per day. Consuming more than this amount will not give any additional benefits.

**What lifestyle changes can patients take to lower their blood cholesterol?**

Lifestyle is very important in helping to control blood cholesterol and its associated risks. Health professionals should advise patients to:

- be a non-smoker (for information on quitting smoking, call the Quitline on 13 QUIT)
- achieve and maintain a healthy body weight
- choose polyunsaturated or monounsaturated oils and margarine spreads
- choose foods such as wholegrain bread and cereals, brown rice, wholemeal pasta, vegetables, fruits, legumes, lean meats and poultry, oily fish and reduced fat dairy products
- consume plant sterol enriched foods as part of a health eating plan
- limit cholesterol-rich foods including offal and egg yolks if advised to do so
- limit alcohol intake to no more than 2 standard drinks per day (men) or no more than 1 standard drink per day (women)
- undertake at least 30 minutes of moderate intensity physical activity on most, if not all, days of the week.
- take cholesterol lowering medication as advised if prescribed.

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**References**

1. Zhang X, Patel A, Horibe H, Wu Z, Barzi F, Rodgers A, MacMahon S, Woodward M and Asia Pacific Cohort Studies Collaboration: Cholesterol, coronary heart disease, and stroke in the Asia Pacific region. *Int J Epidemiol.* Aug;32: 563-72, 2003.
2. Barzi F, Patel A, Woodward M, Lawes C, Ohkubo T, Gu D, Lam T, Ueshima H and Asia Pacific Cohort Studies Collaboration: A comparison of lipid variables as predictors of cardiovascular disease in the Asia Pacific region. *Ann Epidemiol.* May;15: 405-13, 2005.

**Further information**

For more information, contact the Heart Foundation on **13 11 12** (local call cost) or email **health@heartfoundation.org.au**, or visit **www.heartfoundation.org.au**.

For a detailed discussion of the evidence, please refer to the full *Summary of evidence on phytosterol/stanol enriched foods* and the accompanying *Position Statement* on **www.heartfoundation.org.au**. A separate Q&A for the general population suitable for patients is also available from the website.

August 2017