

Do we need to be buying plant sterols?

Do healthy people need to eat food with added plant sterols, like Flora pro-activ or Benecol?

Plant sterols are currently being lauded as a natural, cholesterol-busting wonder ingredient, and can be found in several premium-price margarines, milk products and yogurts. They are present naturally in small quantities in many fruits, vegetables, nuts, seeds, cereals, beans, and other plant foods containing fats and oils, and they can be sold commercially as supplements or added as a component of 'functional' foods.

There are over 60 types of plant sterol, but the most common form is beta-sitosterol. Plant sterols are almost identical in chemical structure to cholesterol and are processed by the body in the same way. They function as cholesterol-lowering agents in blood by blocking the absorption of cholesterol from food during digestion and also by blocking the re-absorption of cholesterol manufactured in the liver.

The American Heart Association warns that products with added plant sterols are

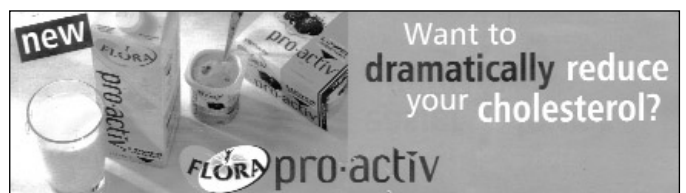
intended for people who want or need to lower their blood cholesterol levels. It says that patients on cholesterol lowering medication should use these foods in consultation with their health care provider. In particular it advises that the foods may not be appropriate for children or for pregnant and breast-feeding women.

Randomised trials have shown that typical consumption of foods with added plant sterols (contributing an extra two to three grams of plant sterols each day) can also lower blood concentrations of valuable antioxidants, such as beta-carotene by about 25%, alpha-carotene by 10%, and vitamin E by 8%, and people who are taking these products are urged to consume more fruit and vegetables to compensate for these losses.

Interestingly, most trials of the plant sterol enriched foods which show that they do have an effect on blood cholesterol do not directly compare eating these products with eating a healthy diet rich in fruit and vegetables, although the companies state that the benefits of the products are found when eaten 'as part of a healthy diet and lifestyle'.

But Flora tells us that once you start eating these products you shouldn't ever stop: *'Missing out on your daily intake of Flora pro-activ for a day or two will not cause a problem. However, remember that plant sterols will only actively prevent the absorption of cholesterol if consumed on a regular basis i.e. at least two meals a day is preferable.'*

There are some doubts about their effectiveness: In controlled studies dietary changes which include these products can reduce total cholesterol by 10 to 15%, but in subjects who were free to supervise their overall diet and use of the products (i.e.

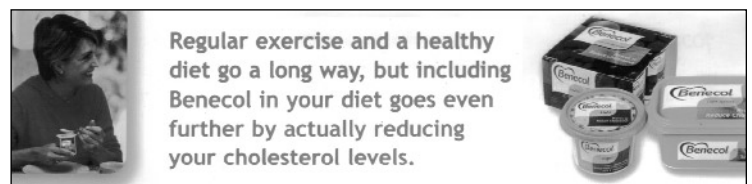


Plant sterols can 'dramatically reduce' cholesterol levels during controlled trials. They may also dramatically reduce the uptake of essential antioxidants.

people living normal lives, like those who buy such products off supermarket shelves), less than half this reduction is achieved.

The American Heart Association is also cautious, suggesting that no studies have shown long-term heart benefits, and these products should not give people a false sense of security. Basic diet and lifestyle changes, as recommended for years, rather than one easy change, are advised. The British Heart Foundation agrees, suggesting that *'however effective sterols are in helping to control cholesterol levels, it is vital that people also eat plenty of fruit, vegetables and fish, stop smoking and increase their activity to reduce their overall risk of coronary heart disease.'*

For people with normal levels of blood cholesterol there is little advantage gained from eating these products. A healthy diet with plenty of fruits, vegetables and especially grains, nuts, beans and seeds, will provide a modest amount of plant sterols – as well as a host of other beneficial nutrients – reducing the need to take high doses through specialised (and expensive) manufactured products.



Benecol extols the virtues of its product but also gives some very outdated advice, such as telling consumers to avoid cholesterol rich foods such as eggs, shellfish and offal. Whilst this may seem to make sense, eating cholesterol has a surprisingly small effect on our cholesterol levels. Consumption of fats, especially saturated fats, are widely recognised as the prime cause of rising cholesterol levels.

Some foods naturally rich in plant sterols (per 100 grams of the food)

Avocado	80mg
Walnuts	70mg
Almonds	120mg
Soya beans	160mg
Olive oil	220mg
Peanuts	220mg
Sunflower seeds	530mg
Wheat germ oil	559mg
Sesame seeds	710mg
Corn oil	970mg

■ Figures from USDA nutrition database