

## Chocolate claims status as health food



Having only recently digested the fact that some chocolate is good for us, could it be possible that it might be even better than we thought? The answer is a resounding YES if the work of prolific producer Barry Callebaut is anything to go by.

Chocolate has always contained good things, such as magnesium for memory and muscle health, theobromine and caffeine, which help lift the central nervous and respiratory systems and in the case of milk chocolate, a good dose of calcium for your bones too.

The buzz in recent times has been about the antioxidant content of chocolate, which increases with the percentage of cocoa. Sounds too good to be true? Just what are the antioxidant properties of chocolate?

Cocoa beans contain considerably larger amounts of polyphenols (or antioxidants) than red wine or other commonly known sources of antioxidants such as green tea and grapes. Antioxidants from cocoa beans are significantly more active than other traditional sources such as vitamin E.

Polyphenols are natural components found in several plants (fruits, vegetables, cocoa). Scientific evidence suggests that polyphenols protect the body against the damage of free radicals and inflammation. The polyphenols found in cocoa belong to the category of Flavanoids, in particular, the flavanols. In cocoa they are present in abundance. Cocoa also contains even more complex flavanols, known as procyanidins. These are powerful antioxidants protecting body cells against the effect of free radicals. Free radicals accelerate the ageing process and are responsible for the degeneration of certain bodily functions. Flavanoids have a positive effect on the cardiovascular system, immune system, lower cholesterol/blood pressure and increase the function of blood vessels. It is little wonder that dieticians the world over are recommending a diet rich in polyphenols.

*Cocoa contains more effective polyphenols than red wine, green and black tea:*

<i>Drink</i>	<i>Total Polyphenol Content</i>	<i>Epicatechine, a flavanoid</i>
<i>Cocoa (200ml)</i>	611	564
<i>Red Wine (140ml)</i>	340	163
<i>Green Tea (200ml)</i>	165	47
<i>Black tea (200ml)</i>	124	34

Whilst the antioxidant properties of chocolate are now well known- and notably, more quickly embraced than other healthy "discoveries", it has not been possible to offer consumers the same antioxidant properties in cocoa powder as those in chocolate. This has meant that consumers have not been able to benefit from these superior antioxidants in liquid form.

The challenge for chocolate producer Barry Callebaut was to develop a method to preserve polyphenols during the chocolate production process.

With ACTICOA™, Barry Callebaut have developed a special process where the polyphenols present in the cocoa bean are retained to a maximum level during

the chocolate making process. In the traditional production process a significant reduction of the amount of flavanols occurs inevitably.

The full ACTICOA™ process passes through several stages; from harvesting and processing of the cocoa bean to the production of the chocolate. This process involves careful selection and handling of the beans. It is during the fermentation of the beans that the amount of polyphenols, in traditional methods is significantly reduced.

The opportunities abound for manufacturers of chocolate milk drinks for example. Chocolate milk utilises cocoa powder which traditionally contains very low levels of polyphenols.

ACTICOA™ is the only cocoa powder that contains cocoa flavanols in such high quantities: on average three times more than standard cocoa powders. Scientific research indicates that cocoa flavanols are among the most powerful antioxidants to be found in foodstuffs. ACTICOA™ is appropriate for almost every cocoa powder application: specifically drinks, dry-mixes, dairy desserts, functional biscuits and confectionery fillings.

*Comparison of Flavanols and ORAC rating of 3 types of cocoa powder:*

<b>MEASURE</b>	<b>NATURAL COCOA POWDER</b>	<b>ALKALISED COCOA POWDER</b>	<b>ACTICOA COCOA POWDER</b>
Total Flavanols	46.3	27.75	112.7
ORAC (g)	826	402	2,129

Antioxidant capacity of foodstuffs is expressed as the ORAC value (Oxygen Radical Absorbance Capacity). A daily intake of foods with a combined value of 4000 ORAC is recommended. This means, just 2 grams of ACTICOA™ cocoa powder covers one adult's daily needs.

It is no surprise to learn that chocolate was used as a medicine by early Central American societies. At some point in history we decided that something that tastes so good couldn't possibly be healthy! While it probably won't appear on a prescription schedule in Australia any time soon, we can rest assured that our

daily intake of antioxidant rich foods can include chocolate products. Yes, chocolate and a glass of red wine, being healthy couldn't taste better!

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