Antioxidants in food, drinks and supplements for cardiovascular health: professionals

<table>
<thead>
<tr>
<th>Antioxidant sources reviewed</th>
<th>Good choice for heart health</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit and vegetables</td>
<td>Yes</td>
<td>At least two serves of fruit per day. At least five serves of vegetables per day. Either black or green tea made with leaves or tea bags. May add reduced, low or no fat milk. Use raw cocoa powder in drinks and cooking. Most commercial cocoa and chocolate will be poor sources of antioxidants. People who already drink coffee should drink less than five cups per day of paper-filtered, percolated, café-style or instant coffee in preference to boiled or plunger coffee.</td>
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<tr>
<td>Tea</td>
<td>Yes</td>
<td></td>
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<td>High polyphenol cocoa</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Chocolate</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>Limit</td>
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</tbody>
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Polyphenols are a type of antioxidant.
Antioxidant sources reviewed | Good choice for heart health | Recommendation
--- | --- | ---
Red wine | No | The amount of alcohol consumed has more impact on cardiovascular health than the type of alcohol consumed. Healthy Australians who already drink alcohol should drink no more than two standard drinks per day. Combination or individual antioxidant supplements are not recommended for the prevention of cardiovascular disease.
Antioxidant supplements | No |  

Why did the Heart Foundation review the evidence on antioxidants?

There are many foods, drinks and supplements that claim to have cardiovascular health benefits due to their antioxidant content. Consumer confusion around the health benefits of antioxidants led us to review the evidence and provide recommendations for antioxidants and cardiovascular health.

The scope of foods and drinks included in our review was based on consumer and health professional enquiries to the Heart Foundation. As such, we focused on fruit and vegetables, tea, cocoa, coffee, red wine and supplements.

We know that there are other whole foods, herbs and spices that may contribute to our daily antioxidant intake. We recommend these foods be included as part of a healthy balanced diet.

What is the Heart Foundation's message on antioxidants?

The Heart Foundation's review of antioxidants in food, drinks and supplements for cardiovascular health found that a balanced diet with a wide variety of plant-based foods will provide the antioxidants beneficial for cardiovascular health.

The Heart Foundation has not set daily requirements or limits on antioxidant intake. It would not be useful to set these amounts until food labelling laws require antioxidants to be written on the label.

Even if we know the antioxidant capacity of a food, individuals will absorb and metabolise antioxidants differently. In addition, foods and drinks may have health effects that are independent from their antioxidant component.

Fruit and vegetables

How many serves of fruit and vegetables should people consume?

The Heart Foundation recommends consuming at least two serves of fruit and five serves of vegetables every day, in line with national recommendations.

State and national statistics tell us that slightly more than half the number of Australian adults consume two serves of fruit a day, but that few consume five serves of vegetables a day.
How can people increase their intake of fruit and vegetables?

For ideas on increasing fruit and vegetable intake:
- visit our Healthy Eating webpages at www.heartfoundation.org.au/sites/healthyeating/
- use our free online recipes at www.heartfoundation.org.au/recipes
- buy a cookbook from our online shop at http://heartfoundationshop.com/main_menu/.

Are foods and juices with ‘added antioxidants’ a better choice than normal foods and juices?

Antioxidants are commonly added to foods such as vegetable oils and processed foods to prevent or delay them going off. However, some foods and drinks may be marketed as being a better choice than others because they have antioxidants added to them.

The Heart Foundation found that whole foods, such as fruit and vegetables, and tea and cocoa are a better choice than foods and drinks with added antioxidants, or using supplements, to boost daily antioxidant intake.

Chocolate

Why is the Heart Foundation recommending raw cocoa powder?

Our scientific review found that consuming high polyphenol cocoa/chocolate reduced risk factors for cardiovascular disease, such as endothelial function and high blood pressure. While the research showed benefits from high polyphenol cocoa/chocolate, everyday products that use high polyphenol cocoa/chocolate are not widely available.

Raw cocoa powder has high levels of polyphenols, and we support using raw cocoa powder in drinks and cooking. Raw cocoa powder is made from raw cocoa beans (cocoa beans that have not been fermented and roasted, a process that can lower their levels of polyphenols). However, roasted cocoa powder is used in most drinking chocolates and commercially available chocolates.

Raw cocoa powder and beans are not widely available in supermarkets, but may be found in health food shops. They can also be purchased from online health food stores.

You can use raw cocoa powder by:
- making a cocoa drink using warm reduced, low or no fat milk
- adding it to drinks
- adding it to fruit smoothies
- sprinkling it on dessert, chopped fruit and salads
- using it in desserts.

Do all chocolates contain antioxidants?

Commercial cocoa powders sold for baking and drinking, and commercial chocolate blocks and bars, lose their original antioxidants through processing. This means they are not good sources of antioxidants.
Will the product’s label tell me which chocolates are high in antioxidants?

No, because food labelling laws in Australia don’t require the levels of antioxidants in foods to be written on the label. It is very difficult to know if a type of chocolate is high in polyphenols.

Some products are labelled with % cacao (total chocolate liquor, cocoa butter and cocoa powder). The higher the percentage, the less sweetness and more flavour, but this is not an indication of the antioxidant content of the chocolate.

Therefore, we don’t recommend some types of chocolate as being a better choice than others.

Isn’t dark chocolate healthier than other chocolate?

The term ‘dark chocolate’ has come to be understood as chocolate with higher levels of cocoa solids and antioxidants, and is generally thought of as being a healthier type of chocolate. But this is not true of all dark chocolate. Some dark chocolate is processed to remove the bitter astringent taste of the antioxidants, and some may have been artificially coloured to make it look darker.

Even good quality dark chocolate that contains some antioxidants may also contain cocoa butter, sugar and whole milk powder, making it high in energy (kJ) and saturated fat. Saturated fat in food raises low-density lipoprotein (LDL) cholesterol, and too much energy can increase weight.

Although a chocolate may contain antioxidants, there are other foods and drinks that are better sources of antioxidants for cardiovascular health that do not have the negative effects of unhealthy fats. These foods include fruit, vegetables, nuts, seeds, wholegrains, cereals, black and green tea, garlic, herbs and spices.

How much chocolate can I eat?

The Heart Foundation suggests limiting sugary, fatty and salty snack foods, such as chocolate, crisps, cakes, pastries, biscuits and lollies, to once a week. Most chocolate will be a poor source of antioxidants.

Tea and coffee

How many cups of tea does the Heart Foundation recommend people have every day, and how should it be prepared?

The Heart Foundation does not set any limit on how many cups of tea people should drink every day, because the longitudinal studies we reviewed did not determine optimal amounts.

The quantity and type of tea someone drinks is up to them. However, we don’t recommend that someone gets all of their recommended daily amount of antioxidants from one source. Therefore we suggest that people enjoy a variety of foods and drinks, and include plenty of fruit, vegetables, wholegrains, nuts and seeds.

Remember that adding milk and sugar to tea may increase energy intake, depending on the number of cups consumed. Choose reduced, low or no fat milk.
Which has more antioxidants – tea or coffee?

The major antioxidants (polyphenols) in tea and coffee are flavonoids and phenolic acids.

Because of the differences in processing and preparation, the polyphenols in tea and coffee are difficult to compare.

A cup of green tea may contain up to 200 mg of catechins (a type of polyphenol) and a cup of coffee may contain 70–350 mg of chlorogenic acid (another type of polyphenol). Due to manufacturing, there is also a difference between black and green tea polyphenol content.

While coffee contains thousands of compounds, one group of compounds have attracted particular attention: caffeine, diterpene alcohols and polyphenols. Caffeinated and decaffeinated coffees contain polyphenols, which change greatly depending on how the coffee beans are roasted.

Coffee can provide some polyphenols, but the Heart Foundation recommends fewer than five cups per day and only of paper-filtered, percolated, café-style or instant coffee, as these types of coffee have little effect on LDL cholesterol levels.

Do herbal teas contribute to daily antioxidant intake?

Yes, herbal teas contribute to daily antioxidant intake because they contain some polyphenols.

Why is paper-filtered, percolated, café-style or instant coffee preferable to boiled or plunger coffee?

Coffee contains oils that raise LDL cholesterol levels. These oils are removed though paper, so instant coffee or coffee that is filtered through paper or the fine metal filter on an espresso machine won't contain these oils.

Coffee made with a plunger or by boiling grounds on the stove top (such as Greek or Turkish boiled coffee) contains the oils at levels that will raise LDL cholesterol more than paper-filtered (drip coffee), café-style (such as espresso, latte and cappuccino) or instant (regular and decaffeinated) coffee.

Red wine

Can red wine help to prevent cardiovascular disease?

The Heart Foundation found a lack of consistent evidence to confirm that the antioxidants in red wine can either prevent cardiovascular disease or be beneficial after a heart attack.

It is more important to abstain from drinking or if you drink alcohol, to avoid binge drinking to maintain long-term health. Therefore the quantity of alcohol drunk is more important than the type of alcohol drunk.

While red wine contains a variety of polyphenols (the amount varies greatly between each bottle), red wine is not a good source of antioxidants for preventing coronary heart disease or maintaining cardiovascular health.
How much alcohol can someone drink and still be healthy?

The Australian National Health and Medical Research Council recommends that healthy men and women drink no more than two standard drinks a day to reduce their risk of harm from alcohol-related disease or injury.1

These guidelines use the Australian standard drink, which is defined as containing 10 g of alcohol (equivalent to 12.5 mL of pure alcohol, 30 mL of spirits, 100 mL of wine, and 375 mL of beer).

If you drink alcohol, the Heart Foundation recommends you follow the above guidelines.

Supplements

Are antioxidant supplements beneficial for cardiovascular health?

Currently, there is insufficient data to recommend the consumption of a combination of antioxidants or individual antioxidant vitamin supplements for the prevention or treatment of coronary heart disease.

The best way to ensure adequate antioxidant intake is to eat a variety of plant-based foods, such as vegetables, fruits, legumes, wholegrain breads and cereals, nuts and seeds every day.

Further information

For more information, please contact the Heart Foundation’s Health Information Service on 1300 36 27 87 (for the cost of a local call), email health@heartfoundation.org.au or visit www.heartfoundation.org.au.


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