



Alcohol and Heart Disease

There has been a great deal of research into the links between alcohol and cardiovascular diseases. These are diseases that affect the heart and blood vessels, and together account for more deaths among Australians than any other group of diseases.

- In this country, the leading cause of death is ischaemic heart disease (a condition where the blood supply to the heart muscle is reduced because the arteries supplying it have become narrowed or blocked by fatty deposits on their walls, causing angina and heart attack).
- Stroke is the third largest cause of death (after cancer), and a major cause of disability. Approximately 80% of strokes result from a blocked blood vessel in the brain (ischaemic stroke), and 20% from a ruptured blood vessel (haemorrhagic stroke).
- Hypertension (high blood pressure) is a major risk factor for both stroke and heart disease.
- Other cardiovascular diseases include peripheral vascular disease (due to the narrowing of the arteries of the leg), and diseases affecting the structure and function of the heart.

The research to date shows that the relationship between alcohol and cardiovascular disease is complex, and not always clear. There are some risks, and some possible small benefit; the outcome may depend not only on the amount that people drink over time, but also on the pattern of drinking, and the age of the person.

Cardiovascular disease: known risks and benefits of alcohol

Harmful effects: Long-term and heavy alcohol consumption is linked with stroke (especially from ruptured blood vessels), high blood pressure, and cardiomyopathy (weakness of the heart muscle, so that the heart doesn't pump blood as efficiently).

A weekend of heavy drinking or holiday binge can result in what has been called the "holiday heart" syndrome (a sudden, irregular rhythm of the heart which can cause symptoms such as shortness of breath, changes in blood pressure, and even sudden death).

- **Benefits:** There is some evidence that a regular pattern of drinking relatively small amounts of alcohol (as low as one standard drink every second day) reduces the risk of ischaemic heart disease in people from middle age onwards (there is no benefit to younger people). The benefit appears to come mainly from the alcohol itself, with little or no additional value from any other components of the drink (and so, for example, there is little if any extra benefit from red wine). Older people who are non-drinkers can protect themselves against heart disease through other healthy life style strategies such as diet, exercise and not smoking.

Stroke

It seems clear that heavy drinking above the low-risk level of two standard drinks on any day is a risk factor for both types of stroke (ischaemic and haemorrhagic), as well as for high blood pressure (which is a risk factor for both types of stroke). Evidence concerning the effect of more moderate consumption is less clear. The weight of evidence suggests that low level alcohol consumption may offer some protection against ischaemic stroke, while increasing the risk of haemorrhagic stroke. The pattern of drinking may also be important in determining stroke risk.

Hypertension

The risk of high blood pressure increases with heavier drinking, and reducing heavy alcohol consumption will reduce blood pressure. At lower levels of drinking, however, the picture has not been as clear, and further research is needed on whether there are some possible benefits from low levels of alcohol consumption on blood pressure.

Peripheral vascular disease

There may be a beneficial relationship between alcohol consumption and peripheral vascular disease (a disease of the blood vessels causing narrowing of the arteries in the leg) but this requires further study.

Cardiomyopathy

Long-term drinking above the low-risk level of two standard drinks on any day can result in a weakness of the heart muscle, affecting its ability to pump blood as efficiently as previously.

Limitations of the evidence for a protective effect of alcohol

Some of the reported benefits of alcohol consumption with respect to reduced heart disease-related mortality may be due to systematic error in many epidemiological studies. For example, study participants classified as abstainers may include a proportion of former drinkers who ceased drinking due to poor health (i.e. sick quitters). Ageing, illness and increased use of medications may also lead people to reduce or cease alcohol use. Thus, the beneficial effects in those classified as light to moderate alcohol consumers may be exaggerated. Recent reviews of higher quality studies that did not contaminate abstainers with former drinkers or occasional drinkers have shown either a minimal, or no, cardiovascular protective effect of alcohol in males or females.

Recommended consumption levels for low-risk drinking

For healthy men and women, **drinking no more than two standard drinks on any day** reduces the **lifetime risk of harm** from alcohol-related disease or injury.

Drinking **no more than four standard drinks on a single occasion** reduces the risk of alcohol-related **injury** arising from that occasion.

Further reductions in the lifetime risk of alcohol-related disease or injury can be achieved by reducing the number of occasions of drinking across a lifetime, for example through regular alcohol-free days.

You can find more information on the recommended levels of alcohol consumption in the Guidelines for Alcohol Consumption Fact Sheet.

Adapted from

Australian Department of Health and Ageing. Australian Alcohol Guidelines Fact Sheets. www.alcoholguidelines.gov.au

Guidelines source

National Health and Medical Research Council (NHMRC) (2009). *Australian Guidelines to Reduce Health Risks from Drinking Alcohol*, Commonwealth of Australia, Canberra.

Other sources

Corrao, G., Rubbiati, L., Bagnardi, V., Zambon, A., & Poikolainen, K. (2000). Alcohol and coronary heart disease: a meta-analysis. *Addiction*, *95*(10), 1505–1523.

Fillmore, K. M., Stockwell, T., Chikritzhs, T., Bostrom, A., & Kerr, W. (2007). Moderate Alcohol Use and Reduced Mortality Risk: Systematic Error in Prospective Studies and New Hypotheses. *Annals of Epidemiology*, *17*(5, Supplement 1), S16–S23.

Stockwell, T., Chikritzhs, T., Bostrom, A., Fillmore, K., Kerr, W., Rehm, J., et al. (2007). Alcohol-caused mortality in Australia and Canada: scenario analyses using different assumptions about cardiac benefit. *J Stud Alcohol Drugs*, *68*(3), 345–352.

Alcohol use above low-risk levels increases the risk of some diseases of the heart and blood vessels.

YOUR HEALTH AND ALCOHOL