The Challenge

While the damaging effects of heavy alcohol consumption on the heart are well established, since the 1970s it has been suggested that light-to-moderate drinking (consuming between 12-25 units of alcohol per week) may have a protective effect on heart health. However, studies are likely to suffer from limitations that may affect the validity of their findings.

The Research

Randomised controlled trials into the long-term health effects of alcohol are challenging because it is hard to set up studies of large groups of people who will maintain the same alcohol consumption levels over an extended period of time, and may be unethical. Instead, researchers used a method with a gene as a proxy indicator of alcohol consumption to look at associations between drinking and cardiovascular health. They looked at evidence from over 50 studies into the drinking habits and cardiovascular health of over 260,000 people.

The Results

The study found that individuals who carry a genetic variant of the ‘alcohol dehydrogenase 1B’ gene, on average, tend to consume lower amounts of alcohol. The researchers found that individuals who were genetically predisposed to consume lower amounts of alcohol had on average a 10% lower risk of having coronary heart disease, lower blood pressure and lower body mass index. The authors found consistent results for light-to-moderate drinkers suggesting that reducing alcohol consumption, even for light-to-moderate drinkers, is beneficial for your heart, thereby challenging results of previous studies.

The Impact

The genetic method used in this study parallels the principles of a randomised control trial and therefore makes it less prone to some of the limitations of earlier studies. These limitations are partly due to bias from the effects of other healthy behaviours associated with a lifestyle of low-to-moderate alcohol consumption and may explain why a protective effect has been observed in past studies, but does not mean that alcohol itself is protective.

For more information about heart attacks visit: www.nhs.uk/conditions/Heart-attack

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