Healthy drinking: as important as healthy eating

Against a setting of increasing consumption of sugar sweetened beverages (SSBs) particularly in emerging regions such as Asia and Eastern Europe, new research has shown that drinking just one can of soft drink per day increases the risk of coronary heart disease (CHD) by 19% (RR = 1.19, 95% CI: 1.11, 1.28, p<0.01). Sugar sweetened beverages (SSBs) also produced adverse effects on lipids, inflammatory factors and leptin. 'This increased risk is quite substantial, and has important public-health implications. However, cutting consumption of soda is one of easiest behaviours to change. Water, coffee or tea are preferred options to fruit juice, which has a high sugar content, although if diluted with water fruit juice is still preferable to SSBs,' commented Prof. Frank Hu, Harvard School of Public Health, Boston, USA.

Researchers analysed the associations of cumulatively averaged sugar-sweetened and artificially sweetened beverage intake with incidence of fatal and nonfatal CHD in 42,883 men in the Health Professionals Follow-up study. Every 2 years from 1986 to 2008, participants answered questionnaires about diet and other health habits. A blood sample was provided midway through the study.

There were 3,683 CHD cases over 22 years of follow-up. Individuals in the top quartile of SSB intake had a 20% higher relative risk of CHD than those in the bottom quartile (RR 1.20 95% CI 1.09-1.33; p for trend <0.001) after adjustment for age, smoking, physical activity, alcohol, multivitamins, family history, diet quality, energy intake, body-mass index, pre-enrolment weight change, and dieting. Intake of SSBs, but not artificially sweetened drinks, was also significantly associated with increased triglycerides, lipoprotein (a) and inflammatory factors, including C-reactive protein, and decreased HDL cholesterol. Artificially sweetened ‘diet’ drinks, which have been associated with weight gain and metabolic diseases in other studies, were not associated with a significant increase in CHD risk in the study (multivariate RR 1.02; 95% CI 0.93-1.02, p for trend=0.28). However, it was acknowledged that the high-intensity sweet taste may condition people's taste and impact dietary behaviour.

Increased intake of SSB has occurred in parallel with increasing obesity. Recent epidemiological studies have shown a link between SSB consumption and long-term weight-gain, type 2 diabetes and cardiovascular disease risk. It is thought that SSBs may contribute to weight gain in part by incomplete compensation for energy at subsequent meals following intake of liquid calories. In addition, consumption of SSBs may increase the risk of type 2 diabetes and cardiovascular disease by increasing dietary glycaemic load, resulting in inflammation and insulin resistance. Fructose in corn syrup which is used to sweeten these drinks has been shown to promote accumulation of visceral adiposity, and increase de novo lipogenesis in the liver, as well as promote hypertension due to
hyperuricaemia. Prof. Hu commented that SSBs should be replaced by healthy alternatives such as water, to reduce the risk of obesity and chronic diseases. This is especially important in regions such as Asia, where individuals have been shown to be more susceptible to the adverse effects of glycaemic load and diabetes. Switching from SSBs therefore has health benefits. For example, in the Singapore Chinese Health Study, regular consumption of coffee and black tea was associated with lower risk of type 2 diabetes.

SSBs are the new tobacco for the 21st century.

The issue is how best to counter the rise in SSB consumption, especially in developing regions such as Asia. In a recent issue of the *Lancet*, Prof. SL Gortmaker, Professor of the Practice of Health Sociology, Harvard School of Public Health, Boston highlighted the need for co-ordinated collaboration involving governments, international organisations, and the public and private sector, to impact change. Priority actions are to improve agricultural policy, public health policy and to increase funding for prevention programmes. ‘There is an urgent need for worldwide intervention to prevent and control obesity,’ concluded Prof. Hu.

References


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