Major weight loss may reverse heart disease risks associated with obesity, US study finds

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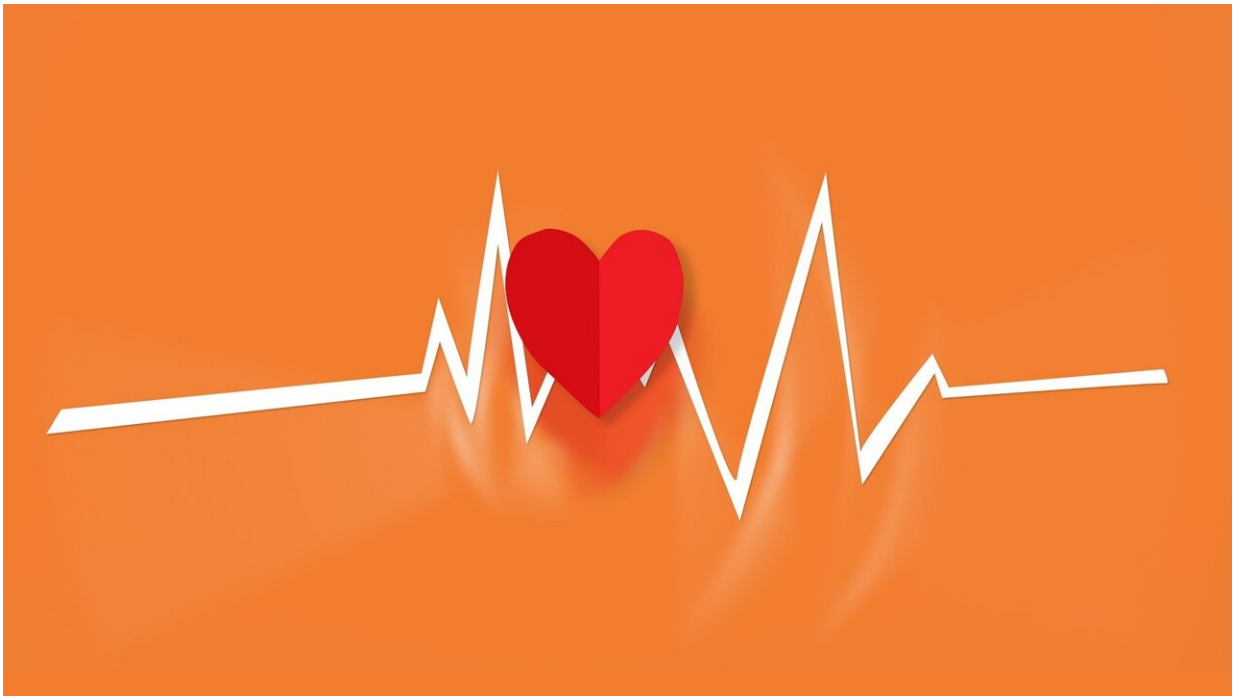

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Major weight loss appears to reverse most of the cardiovascular risks linked with obesity, according to a cross-sectional analysis of the US adult population being presented at the Annual Meeting of the European Association for the Study of Diabetes (EASD), held online this year (27 Sept-1 Oct).

The findings indicate that the risk of high blood pressure and dyslipidemia (unhealthy levels of cholesterol or other fats in the blood) were similar in Americans who used to have obesity (but were now a healthy weight) and those who had always maintained a healthy weight. However, although the risk of current type 2 diabetes lessened with weight loss, it remained elevated in people who formerly had obesity compared to those who had never had obesity.

More than 40% of adult Americans have obesity (BMI of more than 30kg/m^2) and close to one in 10 is classed as having severe obesity. Body weight is directly associated with almost all the cardiovascular risk factors. As BMI increases, so does blood pressure, low-density lipoprotein (LDL, or bad) cholesterol, other abnormal blood fats, blood sugar, and inflammation. These changes increase the risk for heart disease, stroke, and death from cardiovascular disease. However, little is known about whether the effects of obesity persist in those who subsequently achieve and maintain healthy weight.

To find out more, researchers analysed cardiovascular risk factors in 20,271-non-elderly US adults (aged 20-69 years), comparing those who used to have obesity but had been healthy weight for at least the past year (326) to both those who were always a healthy weight (6,235) and those who currently had obesity (13,710). They used data from a series of cross sections, collected biennially from the 1999-2013 National Health and Nutrition Examination Survey (NHANES; a study conducted by the Centers for Disease Control and Prevention) to compare the prevalence of high blood pressure, dyslipidemia, and type 2 diabetes between the groups.

Adults who previously had obesity were on average older than those who never, or currently had obesity, and more likely to smoke cigarettes (36% vs 24% vs 19%). After adjusting for age, gender, smoking and ethnicity, researchers found that the risk of high blood pressure and

dyslipidemia were similar in those who used to have obesity and those who had always maintained a healthy weight.

Compared to those who were always healthy weight, people who used to have obesity had three-fold higher odds of diabetes than those who never had obesity; whilst people with current obesity were seven times as likely to experience diabetes. Those who currently had obesity were also at three times greater odds of current high blood pressure and dyslipidemia.

"The key take away of this study is that weight loss is hard, but important, for cardiovascular health", says lead author Professor Maia Smith from St George's University in Grenada. "First of all, it's no surprise that losing weight and keeping it off is hard. Almost everyone in our original sample who had ever had obesity, stayed that way. But don't despair: if you do manage to lose weight, it can not only prevent but reverse significant health problems. The best time to get healthy is 20 years ago; the second best time is now."

The authors acknowledge that their findings show observational associations rather than cause and effect, and they cannot rule out the possibility that other unmeasured factors (including socioeconomic status) or missing data (eg, dietary habits, physical activity behaviours) may have affected the results. Finally, the study relied on self-reports of disease diagnosis and medication, as well as highest-ever body weight (which might not be accurate).

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