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## Heart Attacks Declining, Rising BMI May Cause Increase



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In a paper published online in the *European Heart Journal*, researchers report that, among 9,453 people taking part in the long-running Whitehall II study in London (UK), there was a substantial reduction (74%) in the chances of a first heart attack (myocardial infarction) among both men and women between 1985 and 2004. This corresponded to an annual average decline of 6.5%.

Over half of this reduction in heart attack rates could be explained by improvements in four of the main risk factors for heart attack: declining levels of “bad” non-HDL cholesterol levels, an increase in “good” HDL cholesterol, reduced blood pressure, and a reduction in the number of people who smoked. There was also a modest but statistically insignificant contribution from increased consumption of fruit and vegetables. Together, these five risk factors accounted for 56% of the reduction in the risk of heart attack.

Trends in physical activity, alcohol and bread consumption had no notable impact. However, there was a steady annual rise in BMI for both men and women, and this was associated with an increase in the risk of heart attack of 11% over the 20-year period.

The research, led by Ms Sarah Hardoon, a senior research associate, and Dr Eric Brunner, a Reader in Epidemiology and Public Health, at University College London Medical School (London, UK), suggests that the increase in BMI could have led to an increase in the incidence of heart attacks during the period of the study, were it not for the favourable trends seen in the other risk factors.

“The substantial decline in myocardial infarction over two decades to 2004, of which more than half could be attributed to favourable trends in well-known risk factors, highlights what can be achieved and emphasises the value of the measures taken to combat risky levels of cholesterol and blood pressure, and to promote healthier lifestyles. However, although these favourable trends seem to have outweighed the negative contribution of rising BMI over recent decades, continued increases in BMI may reduce further, and even reverse, the decline in the incidence of heart attacks in the future. Therefore, the rising BMI in the UK and in other countries needs urgent attention,” said Ms Hardoon.

More research is required to understand what other factors may account for the rest of the reduction in heart attacks that is not explained by these five risk factors. Ms Hardoon said there were a number of possible explanations.

Published on : Tue, 14 Jun 2011