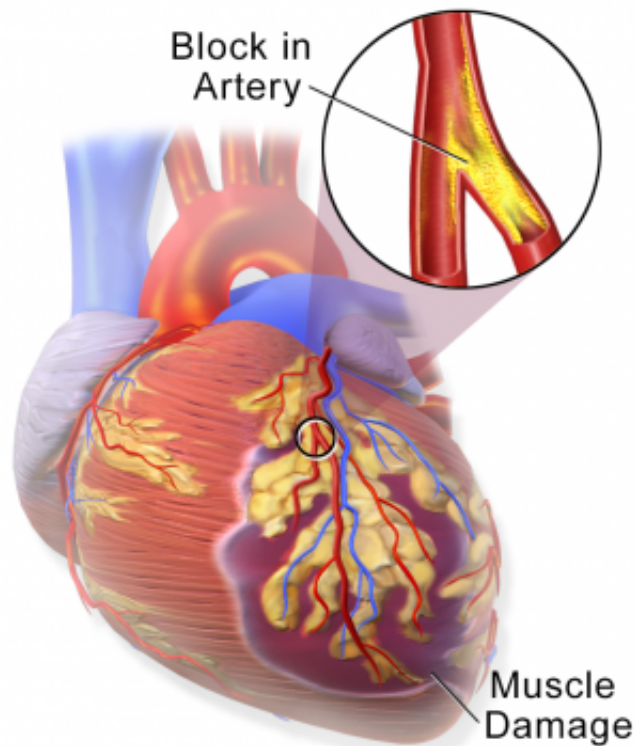


Smoking, diabetes and high blood pressure increase women's risk of heart attack

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Heart Attack

Myocardial Infarction or Heart Attack. Credit: Blausen Medical Communications/Wikipedia/CC-A 3.0

Smoking, diabetes and high blood pressure increase the risk of a heart attack more in women than in men, new research from The George Institute for Global Health at the University of Oxford has found.

The study, of 472,000 participants aged 40-69, found that smoking, diabetes, high [blood](#) pressure and having a BMI >25 puts both men and women at increased risk of having a [heart attack](#). However, while male current smokers have over twice the risk of a [heart](#) attack than men who have never smoked, female smokers were found to have over three times the risk of women who have never smoked, giving them a so-called 'excess risk'.

An excess risk was also found among women with high blood pressure, and Type I and Type II diabetes, but not with a high BMI.

"Overall, more men experience heart attacks than women. However, several major risk factors increase the risk in women more than they increase the risk in men, so women with these factors experience a relative disadvantage," said Dr. Elizabeth Millett, Epidemiologist at The George Institute UK, who led the research using data from the UK Biobank.

The excess risk of heart attack among people smoking 20 or more cigarettes per day when compared with people of the same sex who have never smoked was twice as big in women as in men. High blood pressure was associated with a more than 80% higher relative risk in women than in men, while Type I diabetes was associated with an almost three times higher relative risk, and Type II diabetes a 47% higher relative risk in women than in men.

Heart attack occurs when blood flow decreases or stops to a part of the heart, causing damage to the heart tissue. Patients experiencing heart attack may have symptoms of chest pain, shortness of breath, and pain in their arms, back, neck, jaw or stomach. Additional symptoms, more common in women, are unusual tiredness, dizziness, cold sweats, and nausea or vomiting.

Researchers also looked at the risk of heart attack associated with ageing. While the increase in risk posed by factors such as smoking and high blood [pressure](#) lessened in both sexes as they grew older, the additional excess risk experienced by women was found to persist with ageing.

In the UK, nearly one in seven men and one in twelve women die from coronary heart disease, the leading cause of heart attacks. Over time, population ageing, coupled with the increasing prevalence of unhealthy lifestyles, is expected to result in women having a more similar overall rate of heart attack to men, which is likely to impose a significant additional burden on society and health resources.

"These findings highlight the importance of raising awareness around the risk of heart attack women face, and ensuring that [women](#) as well as men have access to guideline-based treatments for [diabetes](#) and [high blood pressure](#), and to resources to help them stop smoking," Dr. Millett said.

More information: *British Medical Journal*, DOI: 10.1136/bmj.k4247, www.bmj.com/content/363/bmj.k4247

Provided by George Institute for Global Health

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