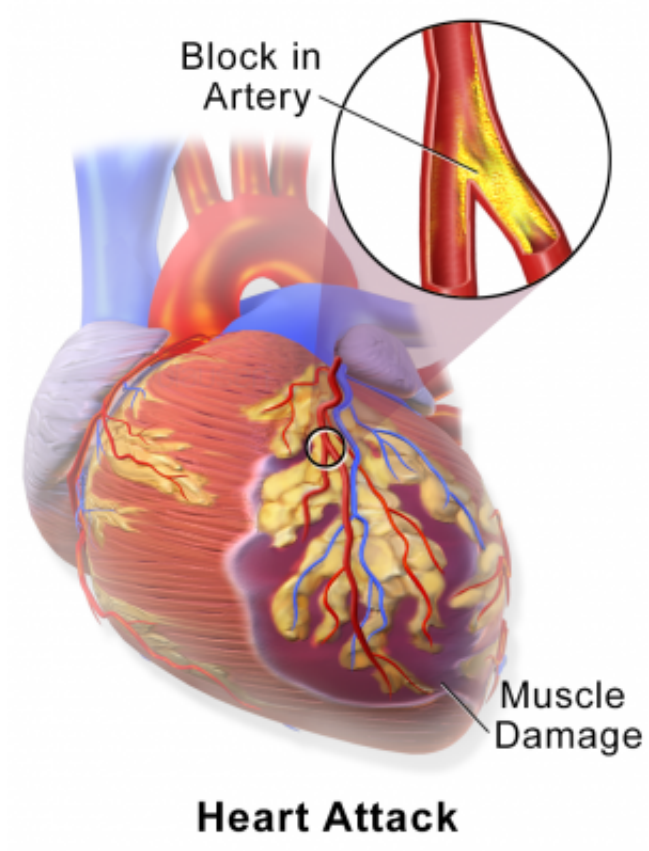
Women found to be at higher risk for heart failure and heart attack death than men

November 30 2020



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

Women face a 20% increased risk of developing heart failure or dying within five years after their first severe heart attack compared with men, according to new research published today in the American Heart

Association's flagship journal *Circulation*.

Previous research looking at sex differences in heart health has often focused on recurrent heart attack or death. However, the differences in vulnerability to heart failure between men and women after heart attack remains unclear.

To study this gap, researchers analyzed data on more than 45,000 patients (30.8% women) hospitalized for a first heart attack between 2002-2016 in Alberta, Canada. They focused on two types of heart attack: a severe, life-threatening heart attack called ST-segment elevation myocardial infarction (STEMI), and a less severe type called Non-STEMI or NSTEMI, the latter of which is more common. Patients were followed for an average of 6.2 years.

Women were older and faced a variety of complications and more risk factors that may have put them at a greater risk for heart failure after a heart attack.

In addition to the elevated risk for heart failure among women, researchers found:

- A total of 24,737 patients had the less severe form of heart attack (NSTEMI); among this group, 34.3% were women and 65.7% were men.
- A total of 20,327 patients experienced STEMI, the more severe heart attack; among this group, 26.5% were women and 73.5% were men.
- The development of heart failure either in the hospital or after discharge remained higher for women than men for both types of heart attack, even after adjusting for certain confounders.
- Women had a higher unadjusted rate of death in the hospital than men in both the STEMI (9.4% vs. 4.5%) and NSTEMI (4.7% vs,

2.9%) groups. However, the gap narrowed considerably for NSTEMI after confounder adjustments.

- Women were more likely to be an average 10 years older than men at the time of their heart attack, usually an average age of 72 years versus 61 for the men.
- Women also had more complicated medical histories at the time of their heart attacks, including high blood pressure, diabetes, atrial fibrillation and chronic obstructive pulmonary disease, risk factors that may contribute to heart failure.
- Women were seen less frequently in the hospital by a cardiovascular specialist: 72.8% versus 84% for men.
- Regardless of whether their heart attacks were the severe or less severe type, fewer women were prescribed medications such as beta blockers or cholesterol-lowering drugs. Women also had slightly lower rates of revascularization procedures to restore blood flow, such as surgical angioplasty.

"Identifying when and how women may be at higher risk for heart failure after a heart attack can help providers develop more effective approaches for prevention," said lead study author Justin A. Ezekowitz, M.B.B.Ch., M.Sc., a cardiologist and co-director of the Canadian VIGOUR Centre at the University of Alberta in Edmonton, Alberta, Canada. "Better adherence to reducing cholesterol, controlling high blood pressure, getting more exercise, eating a healthy diet and stopping smoking, combined with recognition of these problems earlier in life would save thousands of lives of women—and men."

Based on these findings, study co-author Padma Kaul, Ph.D., co-director of the Canadian VIGOUR Centre, said the next step is to further examine if all patients are receiving the best care, particularly women, and where interventions can address oversights.

"Close enough is not good enough," said Kaul, who is also the Sex and

Gender Science Chair from the Canadian Institutes of Health Research. "There are gaps across diagnosis, access, quality of care and follow-up for all patients, so we need to be vigilant, pay attention to our own biases and to those most vulnerable to ensure that we have done everything possible in providing the best treatment."

More information: *Circulation* (2020). DOI: 10.1161/CIRCULATIONAHA.120.048015

Provided by American Heart Association