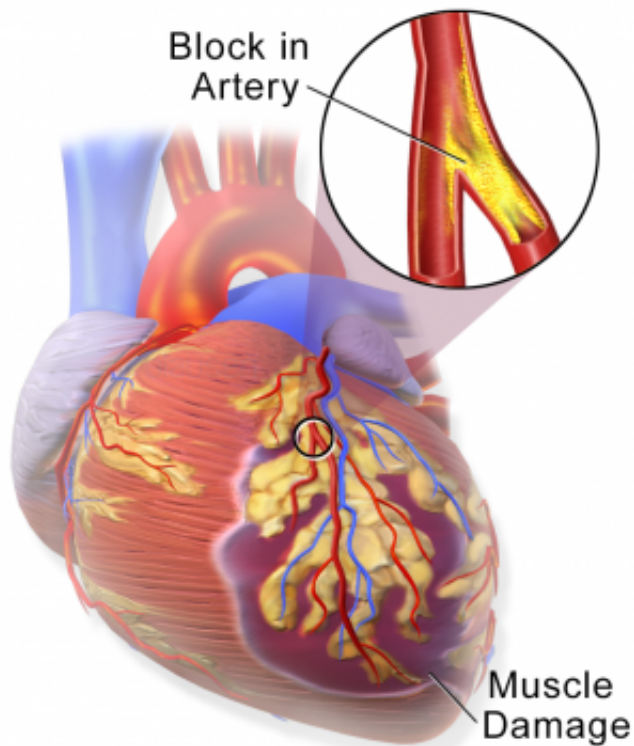


# Emotional upset and heavy exertion may trigger a heart attack

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## Heart Attack

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

Being angry, emotionally upset or engaging in heavy physical exertion may trigger a heart attack, according to new research in the American Heart Association's journal *Circulation*.

In a large international study, researchers found an association (more than twice the risk) between anger or emotional upset and the onset of heart attack symptoms within one hour. The same was true for heavy physical exertion during the hour before their first heart attack.

However, the association was stronger (more than triple the risk) in those patients who recalled being angry or emotionally upset while also engaging in heavy physical exertion.

"Previous studies have explored these heart attack triggers; however, they had fewer participants or were completed in one country, and data are limited from many parts of the world," said Andrew Smyth, M.D., Ph.D., study lead author and a researcher at the Population Health Research Institute at McMaster University in Canada, and at the HRB Clinical Research Facility in Galway, Ireland. "This is the first study to represent so many regions of the world, including the majority of the world's major ethnic groups."

Researchers analyzed data from 12,461 patients (average age 58) participating in INTERHEART, a study consisting of patients with first-ever heart attacks across 52 countries. Participants completed a questionnaire about whether they experienced any of the triggers in the hour before their heart attack. They were also asked if they had experienced any of the triggers in the same one hour period on the day before their heart attack.

Authors said that these triggers appeared to independently increase a person's [heart attack risk](#) beyond that posed by other risk factors, including age, smoking, obesity, [high blood pressure](#) and other health problems.

Smyth said that extreme emotional and physical triggers are thought to have similar effects on the body.

"Both can raise blood pressure and heart rate, changing the flow of blood through blood vessels and reducing blood supply to the heart" he said.

"This is particularly important in blood vessels already narrowed by plaque, which could block the flow of blood leading to a heart attack."

"Regular physical activity has many health benefits, including the prevention of heart disease, so we want that to continue," he said.

"However, we would recommend that a person who is angry or upset who wants to exercise to blow off steam not go beyond their normal routine to extremes of activity."

One limitation of the study was that participants had to recall their triggers. After a heart attack, a person may be more inclined to say they experienced a trigger than they otherwise would be. In addition, participants were not given any descriptions of being angry or emotionally upset or of heavy physical exertion. Self-defined, these triggers appear to have the same effect across countries and ethnicities.

"This large, nearly worldwide study provides more evidence of the crucial link between mind and body," said Barry J. Jacobs, Psy.D., an American Heart Association volunteer and director of behavioral sciences at the Crozer-Keystone Family Medicine Residency Program in Springfield, Pennsylvania. "Excess anger, under the wrong conditions, can cause a life-threatening heart attack. All of us should practice mental wellness and avoid losing our temper to extremes."

"People who are at risk for a [heart attack](#) would do best to avoid extreme emotional situations," Jacobs said. "One way many cope with the emotional ups and downs of a health condition is through peer support, talking with others who are facing similar challenges can be very helpful in better managing your own emotions."

Provided by American Heart Association

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