

Keep calm, anger can trigger a heart attack!

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University of Sydney research reveals that the risk of a heart attack is 8.5 times higher in the two hours following a burst of intense anger.

Published today in *European Heart Journal: Acute Cardiovascular Care*, this is the first Australian study to investigate the link between acute emotional triggers and high risk of severe cardiac episodes.

"Our findings confirm what has been suggested in prior studies and anecdotal evidence, even in films - that episodes of intense [anger](#) can act as a trigger for a [heart attack](#)," said lead author Dr Thomas Buckley, Sydney Nursing School, University of Sydney, and researcher at Royal North Shore Hospital.

"The data shows that the higher risk of a heart attack isn't necessarily just while you're angry - it lasts for two hours after the outburst.

In the study, 'anger' was qualified as 5 and above on a 1-7 scale, referring to 'very angry, body tense, clenching fists or teeth, ready to burst', up to 'enraged, out of control, throwing objects'. Anger below this level was not associated with increased risk.

"The triggers for these burst of intense anger were associated with arguments with family members (29 per cent), argument with others (42 per cent), work anger (14 per cent) and driving anger (14 per cent)," said Dr Buckley.

"The data also revealed that episodes of anxiety can also make you more

likely to have heart attack.

"High levels of anxiety were associated with a 9.5 fold increased risk of triggering a heart attack in the two hours after the anxiety episode.

"Increased risk following intense anger or anxiety is most likely due to increased heart rate, blood pressure, tightening of blood vessels and increased clotting, all associated with triggering heart attacks," he said.

The study was an investigation of consecutive patients suspected of heart attack and confirmed by angiography reports at Royal North Shore hospital. Patients confirmed with acute coronary blockage were admitted, interviewed about their activities in the 48 hours before the onset of symptoms, and usual frequencies of activities were recorded for comparison.

"Although the incidence of anger-triggered heart attacks is around 2%, of the sample, those people were 8.5 times more likely to have a heart attack within two hours of the emotional episode. So while the absolute risk of any one episode triggering a heart attack is low, this data demonstrates that the danger is very present.

"Our findings highlight the need to consider strategies to protect individuals most at risk during times of acute anger.

Senior author Professor Geoffrey Tofler, Preventive Cardiology, University of Sydney said "Potential preventive approaches may be stress reduction training to reduce the frequency and intensity of episodes of anger, or avoiding activities that usually prompt such intense reactions, for instance, avoiding an angry confrontation or activity that provokes intense anxiety.

"Additionally, improving general health by minimising other risk factors,

such as hypertension, high cholesterol or smoking would also lower risk.

"For those at high risk, it is possible that medication such as beta-blockers and aspirin taken at the time of a trigger may interrupt the link between the stressor and the heart attack. We are currently recruiting subjects for a study examining this option.

"Our research suggests that when managing a person with heart disease or in preventing heart disease in others, a person's frequency of anger and anxiety should also be assessed and be part of helping individuals to take care of themselves.

"Our message to people is they need to be aware that a burst of severe anger or anxiety could lead to a coronary event, so consider preventative strategies where possible," Dr Tofler said.

Provided by University of Sydney

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