

# New marker could help to identify heart attack patients most at risk

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## Heart Attack

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

A new study from the University of Sheffield has shown a new blood test could provide a clue as to why some patients are at higher risk of cardiovascular disease risk after suffering a heart attack.

The research may help scientists to identify new targets for reducing the risk and eventually lead to more effective treatments.

During the study, the team of researchers, led by Professor Rob Storey from the University of Sheffield's Department of Infection, Immunity and Cardiovascular Disease, analysed blood plasma samples from more than 4,300 patients with [acute coronary syndrome](#) as they were discharged from hospital.

They measured the maximum density of a clot and the time it took for the clot to break down - known as clot lysis time.

After adjustment for known clinical characteristics and risk factors, the study found that the patients with the longest clot lysis time had a 40 per cent increased risk of recurrent myocardial infarction or death due to [cardiovascular disease](#).

Professor Storey, who is also Academic Director and an Honorary Consultant in the Cardiology and Cardiothoracic Surgery Directorate at the Sheffield Teaching Hospitals NHS Foundation Trust, said: "We have made huge strides over the last two decades in improving prognosis following [heart](#) attacks but there is still plenty of room for further improvement.

"Our findings provide exciting clues as to why some patients are at higher risk after [heart attack](#) and how we might address this with new treatments in the future."

The results, published in the *European Heart Journal*, showed novel therapies targeting fibrin clot lysis time may improve prognosis in patients with acute coronary syndrome.

Professor Storey added: "We now need to press ahead with exploring

possibilities for tailoring treatment to an individual's risk following a heart attack and testing whether drugs that improve [clot](#) lysis time can reduce this risk."

The Department of Infection, Immunity and Cardiovascular Disease at the University of Sheffield is a world-leading centre for pioneering discoveries which help to fight disease and inform inspiring teaching.

**More information:** *European Heart Journal* (2018). [DOI: 10.1093/eurheartj/ehy013/4829678](#)

Provided by University of Sheffield

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