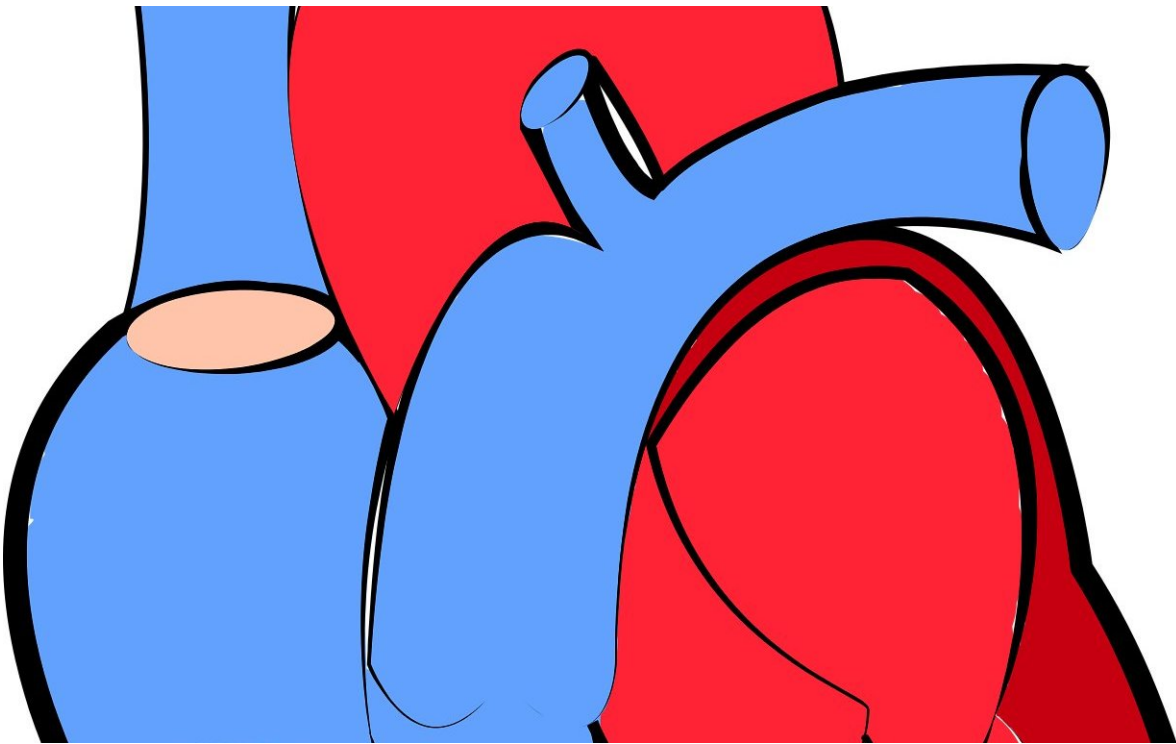


New test could lead to more accurate diagnosis of heart failure

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A new blood test for better diagnosis of heart failure at a far earlier stage will be proposed in research presented at the British Cardiovascular Society Conference in Manchester today.

Heart failure is a long-term condition that occurs when the [heart](#) is

unable to pump blood around the body as effectively as it should. It affects around 920,000 people in the UK and for people with severe heart failure, everyday tasks like going upstairs or walking to the shops become impossible.

The main symptoms of heart failure include shortness of breath and feeling unusually tired or weak, although some people may not experience symptoms until after the condition has progressed over time.

Currently, clinicians can routinely measure levels of a protein called B-type natriuretic peptide (BNP) in the blood through a standard blood test. Elevated levels of this [protein](#) in those living with [heart disease](#) are considered to be a sign of heart failure risk.

However, BNP can be elevated due to many kinds of heart problems and blood levels can be altered by some medications, obesity, and with age. These factors can reduce the accuracy and reliability of BNP when determining the presence or severity of heart failure.

Now, researchers at Queen's University Belfast have discovered that measuring BNP along with other proteins in the blood could potentially provide a more accurate diagnosis of heart failure.

The research, led by Dr. Chris Watson and Dr. Claire Tonry, saw a new method developed to simultaneously measure 25 proteins in heart failure patient blood samples. This was then applied to more than 400 blood samples, collected from individuals with and without heart failure, to test if the proteins could detect which individuals had heart failure and which did not.

In the study, it was found that measurement of the additional 25 proteins offers a more accurate identification of heart failure than measurement of BNP alone.

More patient samples are now being collected from various different hospital sites in the UK, Ireland, France, Greece and the USA to confirm the accuracy of these proteins for heart failure diagnosis and to better understand their potential benefit to patients.

Dr. Claire Tonry, Research Fellow at the Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast, said:

"There's an urgent need to develop tests that can diagnose heart failure at an earlier stage and with greater accuracy in order to improve outcomes for patients with the disease.

"It's difficult to measure multiple biomarkers in blood in a single test but, through our method, we were able to quickly measure multiple proteins from the small amount of blood that's routinely collected by clinicians for measurement of BNP.

"The results from the [test](#) are promising and we're now carrying out further research to see if this will be a clinically useful tool for diagnosis of heart failure."

Dr. Sonya Babu-Narayan, Associate Medical Director at the British Heart Foundation, said:

"Heart failure still kills thousands of people every year in the UK and its symptoms may be cruel and debilitating. We are seeing a significant increase in people going to hospital with heart failure, as the population ages and more people develop the disease after surviving a heart attack.

"It is vital that heart failure is diagnosed as soon as possible, given there are treatments to delay its progression and to treat symptoms.

"It is early days but if new [blood](#) tests like this yield earlier and more

accurate heart failure diagnosis, people living with [heart failure](#) could receive treatment sooner. This will help them to better manage their symptoms so they can live full and active lives for longer."

The research has been funded through the Queen's University Belfast Alumni fund, with additional funding from Enterprise Ireland and the Health Research Board.

Provided by British Heart Foundation

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