

# Chronic kidney disease patients could be at similar levels of coronary risk to those who have previously had heart attack

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Patients suffering from chronic kidney disease could be at as high a risk of coronary heart disease as patients who have previously had a heart attack, according to an article published Online First in the *Lancet*.

While it has long been established that patients with chronic kidney disease are at higher risk of heart attacks, the new study is the first large-scale, long-term study to examine whether kidney disease should be considered to be equivalent to having previously suffered a [heart attack](#), in terms of the risk of future coronary events.

Lead researcher Dr Marcello Tonelli of the University of Alberta, said: "Our research suggests that there is a strong case for considering chronic kidney disease to be a coronary [heart disease risk](#) equivalent, meaning that people with chronic kidney disease are at a comparable risk of coronary events to those who have previously had a heart attack. Chronic kidney disease patients have substantially higher rates of death from heart disease after a heart attack than the general population, which emphasises the potential value of preventing coronary events through drug treatment and [lifestyle interventions](#). In fact, the rate of death from heart disease among people with chronic kidney disease was similar to or higher than the rate of death among people with [diabetes](#) – in whom the value of preventive treatments is well known."

The study examined records from almost 1.3 million patients in Canada,

comparing the incidence of heart attacks and death in patients with chronic kidney disease, diabetes, at least one previous heart attack, or a combination of these risk factors. The researchers found that people with chronic kidney disease, diabetes, or both, tended to experience a comparable risk of heart attack to those who had previously had a heart attack, suggesting that kidney disease could prove to be a useful prognostic marker for [coronary heart disease](#).

The findings are important because patients identified as having a coronary heart disease risk equivalent can receive targeted treatment – for example, with drugs such as statins, which reduce the risk of [coronary events](#) due to their effects of lowering "bad" fats (lipids) in the bloodstream. In the UK, almost 9% of the [population](#) are thought to suffer from chronic kidney disease, which often – but not always – accompanies diabetes, already thought of as a coronary heart disease risk equivalent.

In an accompanying Comment, George Bakris of The University of Chicago, urges caution in the interpretation of the results, suggesting that although the study's large scale is an advantage, a lack of information about individuals' medication and other factors such as blood pressure means that the findings don't necessarily provide clear-cut support for the classification of chronic kidney disease as a coronary heart disease risk equivalent.

However, even if further analysis fails to support the classification of chronic kidney disease as a coronary [heart disease](#) risk equivalent, the work is still likely to have important implications for coronary disease prevention strategies. As Professor Bakris states: "Tonelli and colleagues offer new insight by comparing individuals with chronic kidney disease with those who have a history of heart attack, on a very large scale. Their findings emphasise the importance of primary prevention, particularly because patients with [chronic kidney disease](#) comprise a large proportion

of patients who have heart attack."

**More information:**

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)60572-8](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)60572-8)

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